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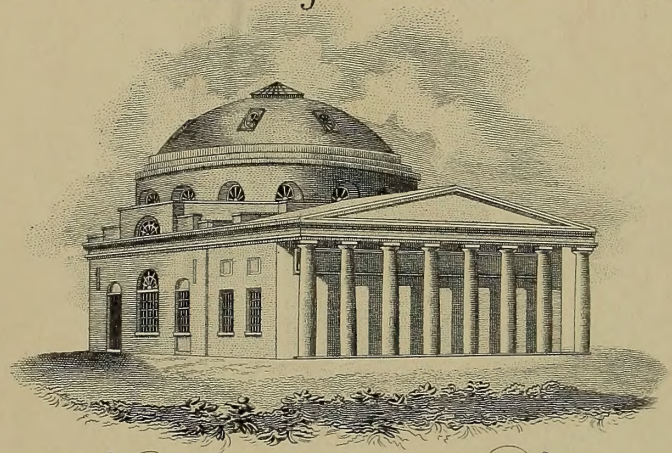

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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[1] Faded.
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HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

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[5] Illustration on dedication.

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

UNIVERSITY OF MARYLAND

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UNIVERSITY OF MARYLAND
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An Inaugural Dissertation
On Insanity
Submitted for Examination to
The Provost Regents and Faculty of Physic
Of the University of Maryland for the
Degree of Doctor of Medicine

By
Joseph Glacken
of Maryland.

# Insanity.

Insanity is a term, in its true signification which includes all mental defects but I will use it here to the exclusion of many temporary disorders of the mind for want of a better term, such as the delirium of fever, the hallucinations of hysteria, the cerebral irregularities from exquisite pain, or organic disturbance in different parts of the body, the irrational confidence and hopes of [illegible] the equally irrational depression of dispepsia, the stupor of Apoplexy, and the imbecility of old age we will not be considered as falling within the meaning of the term Insanity. The seat of the disease is the subject of a great controversy. Pinel maintains that the primary seat of the disease is in the epigastric region whence the morbid irritation is propagated to the common sensorium. Dr. Eberle thinks it is highly probable in many instances that the primary source of Insanity consists in an irritation seated within the abdomen. I believe the majority of Physicians concur with Professor Wood that the disease is

essentially sealed in the brain. It is through the medium of the brain that we thence and experience any emotion but derangements in these two modes of mental exhibition, whatever may be their cause whether epigastric derangement or not, are necessarily cerebral disorders. The brain if not a complex organ has complex functions devolved upon its performance and it may be deranged in the whole of these functions, or in any one only or in many of them, and there is scarcely any limit to the diversity of mental disorders which may thus arise; but however, an arrangement is necessary for the purpose of discription and I know of no better plan than that of Prof Wood which divides the disease primarily into general and partial Insanity and subordinately into mania and dementia, both which belong to the first division, and moral insanity monomania and Insane impulse belonging to the last. By general Insanity is meant a derangement in all the cerebral functions to a greater or less extent, connected essentially with the mind.

By partial Insanity is meant a derangement of one or more of the cerebral functions retaining the whole disease. Mania is a general derangement of the cerebral function characterized by a rapid succession of abstract ideas and violent excitement of the passions expressed by great agitation boisterous singing menaces and fury. Dementia. this variety of Insanity consists not in false perception like the worst forms of madness but of an association of unexpressed ideas from the inability of the mind to perform the operations of Judgment and reason. Judgments are sometimes decided by sensible objects, but ideas collected together and becoming confused frequently constitute a paroxysm of the disease. Moral insanity is a particular disorder of the cerebral functions, when it effects only the emotional functions as contradistinguished from the intellectual,

In Monomania there is always, as the word implies a derangement in some one of the cerebral functions notwithstanding the person may be rational in all the other functions. Of Insane impulse. When a patient

labours under this form of insanity he may at any time without reflection be irresistably impelled to the perpetration of some atrocious crime. Each of the above species of insanity require seperate discription.

It cannot be expected that in the course of practice we shall find the above enumerated disorders always existing as distinct complaints. They sometimes exist as well characterized, but in most instances this is not correct.

General insanity occurs more frequently than partial according to the Hospital reports, and in relation to the subdivisions mania and monomania are about equal. Symptoms connected of mania. Mania sometimes comes on very suddenly without any premonitory symptoms, but more frequently it is gradual in its attack. It is generally preceded by a marked change in the habits of the patient. He is most commonly unmarried, his sensibilities are keen, ideas rapid, temper irritable. He is sometimes talkative and buoyant. The peculiarity of the symptoms of the first stages of this complaint are frequently attributed.

to eccentricity or whim of the patient by his friends but in a variable course of time the disease becomes fully developed. He is eager, enthusiastic - unsettled: flies from one object to another, and at last busied with trifles. He sleeps little, speaks much, and is harassed with dreams. He forms extravagant plans for the acquisition of wealth or the good of the public or in the other looses all by extravagance and misfortune. He immagines evil of those about him, accuses them of impertinent interference in his affairs. Friends and relations are often charged with various wrongs by him and he is very excitable and can be put to tears by a cross word from one of his confidants.

Between the extremes of mental condition before alluded to as characterising the forming stage of insanity there is every variety. Inability to sleep is a prominent symptom. If attended to in due season the disease may be arrested in its commencement. In women the first symptoms are of an histerical character. The incubative stage of insanity varies from a few days to months and even years. When the attack

is sudden it is apt to be acute in character and resembles [illegible] in its worst form except that the fever is hardly ever so high, there is less tendency to stupor and its progress is less rapid After a variable period of from one week to two months or longer the symptoms assume the character of cerebral depression and death ensues preceded by coma or what is more frequent a gradual change for the better takes place and all the unnatural symptoms which characterize the disease disappear. Sometimes chronic insanity results but however it is my place to mention that this is not often the case. Chronic insanity is gradual in its attack for the most part and there is less tendency to febrile excitement. One of the most frequent symptoms of mania is that there is a constant tendency to paroxysms, and when these paroxysms are violent they have received the name of raving madness. These paroxysms are of variable duration, lasting from an hour to days and even weeks. During the paroxysms the symptoms are

grave. They occur at times spontaneously, and they may be the result of undue vascular excitement; Denial opposition and restraint may have an ill effect: so also has a perverted immagination and in such cases the physical disturbance may be the result of violence. Mania may be remittent or intermittent, the paroxysms occuring at certain intervals as do the different forms of Malarius fever. The recurrence of the paroxysms are owing to cause too numerous to mention, but in fact any cause which interferes with the general health is calculated to give rise to a paroxysm. It would be out of place for me at this time in a limited thesis like this, to give the many phases which mania presents in different cases. As to where knowledge can be obtained of Insanity I presume the reader is better informed than myself. Drs Rush, Pritchard and Esquirol have written on this important subject. All the state expressing functions of the mind, whether active or passive are deranged. There is no point in relation to the intellect the feelings, the conscience or the will in which the patient is sound

the character of insanity in a few cases both in its intellectual and moral bearings derives an impress from the natural peculiarities of the patient. Ambition leads armies, sits upon thrones and usurps even the place of Deity. Vanity decks herself in gewgaws and tinsel and love lavishes itself upon inanimate objects. But it is sometimes the case that the character of the patient is wholly changed; suspicion takes the place of confidence love is turned into hate & modesty the chief ornament of youth gives way to utter rudeness of manner and speech. Some are of cheerful feelings other discontented peevish and unhappy; and others again between the two extreems are continually vacillating, being at one time cheerful at another dull, now trustful and then again suspicious. One of the most prominent peculiarities of Mania is the patients entire unconsciousness of his real condition. He has full confidence in his own judgment and the reasonableness of his conduct. Some immagine that they are sane and that world around them is mad and sometimes exhibit considerable ingenuity in

proving it like the insane editor in one of the asylums who having collected from the newspapers instances of violence, lawlessness and criminality ended with the exclamation or something to the same effect "And this is the world which considers itself sane".
They are very sensitive and ought to be kindly treated. It is sometimes the case that immaginary sights are seen by the maniacs. Immaginary sounds are also heard by them. They frequently converse aloud with immaginary persons and objects and receive perverted impressions of all the psychological functions, though this is not always the case. We have however many examples of the perversion of one or more of the senses as by the immaginary beauty of a hog dog cat &c or in fact any person thing or object which is within his view or grasp may be gifted with attributes of humanity:- a pillow or a stick of wood may be fondled as a child. We may sometimes see a patient lifting up a bed~~stead~~, or flower pot, to save the bedstead or flower stand from fatigue. As a general rule the judgment suffers

more than any other faculty, and the memory less than any other. It happens frequently that past events flow vividly back to their remembrance and they often take a malicious pleasure in recalling past events especially if they have been harshly treated in wealth or sickness. They are like children in many respects. They often may be restrained from giving way to their insane propensities or induced by the example of those around them to regulate their deportment. As a general thing the Emotional functions are less disordered than the Intellectual In the meantime I wish to mention that the Emotional functions do not always escape by any means. Sometimes there is a complete change in the natural qualities of the patient. He is more irritable than when in health, gives way more readily to impulses, is often suspicious revengeful and malicious, and his countenance seems painfully expressive of uncontrolable passion. The natural affections are frequently also perverted. Connubial Parental and filial love are exchanged for indifference

fondness suspicion and even hatred. The perversion of the natural affections seems to be proverbial with the writers on Insanity since time immemorial. It sometimes happens that these are the first symptoms which become manifest. Ambition Pride and vanity are frequently observed by the attendants. They form morbid attachments and love in its purest form is frequently manifested especially by women who betray their insanity by openly lavishing marks of kindness which in their sane state they would endeavour to conceal. Lascivious desires are openly expressed in language and gestures. They neglect personal cleanliness and some even take delight in smearing themselves with their own excrement sooner than with soap and water. They do not seem to have steady courage notwithstanding the violence of the paroxysms. The patients are sometimes almost instantly submissive to the commands of those in charge but it is not best to rely too much on their submission for fear of deception. Their thoughts and feelings are exceedingly unstable. The patient

passes rapidly from one state to another, the mental chords seem to vibrate in quick succession with the whole gamut of the passions. His strength is often increased during the paroxysms. After the subsidence of the symptoms of the physical disorder, if any exist, the general healthfulness does not seem to be impaired. He is also subject to attacks of other complaints at the same time. He is for the most part somewhat thinner of flesh than when in health together with the ordinary dyspeptic symptoms. If the disease continues it may pursue one of two courses; that is it may gradually pass into Dementia which disease I will hereafter describe, or it may settle into confirmed Mania which thus becomes the habit of the mind. This may continue for many years and even through life. The patient is generally carried off by some accidental disease, as phthisis, inflamation of the lungs, pleura, or alimentary canal. Mania has a constant tendency to shorten life in consequence of the wearing effects of continued nervous excitement upon the

organic functions but also more powerfully influences health accidental, to which the patient is often exposed such as confinement, unwholesome diet, excess of cold or heat, insufficient clothing &c &c. Recoveries often take place within the second and third years but rarely afterwards, though there are cases of recoveries on record which took place at a much later period. The cure is sometimes abrupt, the patient passing at once from insanity to the perfect possession of his faculties most generally it is gradual. It is supposed that such abrupt change is occasioned by the supervention of some other disease or the occurrence of critical affections such as diarrhoea colliquative sweats, nasal hemorrhages, abscesses or cutaneous eruptions. One of the most favorable circumstances is the appearance of convalescence such part of the patient of his real condition. The convalescence usually occupies from two to eight weeks. In some the cure is perfect, in others it is but partial. Relapses are said to occur in one out of every fourteen cases &c

# Dementia

This is not be remembered is that form of general Insanity in which the mental functions are infected. It is a condition of mental weakness or fatuity differing in its whole form from Congenital Idiocy only in the circumstance that in the latter there never has been intelligence and the mind appears to be blank. The affection is characterized not by the want of ideas but by the confusion of collected ideas. The passions the conscience the will are not wholly obliterated but the exhibition of them is merely fragmentary. The memory of the past is generally very imperfect and the present objects and incidents are immediately forgotten. The Judgment is generally excited by sensible objects, but Ideas collected together without order frequently constitute a paroxysm of the disease Dementia is not abrupt in its attacks, but generally comes on gradually and consequently exists in every form from the mildest to the extreme imbecility. This form of

disease is seldom met with in Hospitals but
is scarcely a city or village or country place
that does not furnish us with one or more instances
of this disease Persons who are afflicted with it
are good tempered and quarrelsome, malicious
and kind generous and miserable all in the
course of the same day. When it is the wealth
of mania or monomania it makes its appearance
by a gradual diminution of coherence in the
thoughts the actions, the memory, the will, the
feelings and the passions. These are also morbidly
infeebled. Violent paroxysms still occur but
they are less frequent and more subdued.
Dissection proves the existence of chronic inflam-
mation of the brain and its appendages. The
above rule not hold good in all cases. In
a few instances mania passes into Demential
unattended by any paralytic symptoms whatever.

I before mentioned that patients laboring
under the various forms of mania were apt to
be emaciated but it sometimes happens that the

verse is the case. Dementia is sometimes an original affection. The first and most prominent symptoms are loss of memory and misapplication and construction of words and sentences. Sometimes the patient appears to have lived in the past, and speaks of having visited persons long since deceased or of mingling in events which had occurred in his youth. The faculty of reason gradually disappears. Objects and incidents of the present quite disappear and reminiscences of the past spring up fresh to his memory. The feelings the conscience and the will undergo a gradual decay. The emotional functions are greatly impaired, & former friends are often treated coolly. Patients in this condition are capable of certain habitual employments which require no mental exertion. They may amuse themselves in various ways with some degree of regularity. However as the disease progresses these privileges are lost. The patient is then reduced to the state of a Brute without its instincts the lower animal

functions only remaining. Some are noisy and others quiet. Some are active and others inactive and stupid and pay no attention to any thing that is going on about them, eating only when food is placed before them. Neither do they pay any attention to personal cleanliness or to the commands of those encharged with their keeping with respect to the offices of defecation and micturition they will stare at you with a meaningless stare a vacant face or an idiotic laugh. Some traces of intellect some excitement of the passions some little show of sentiment may now and then appear like a faint and glimmering light in the dark. Death in Dementia may result from the supervention of any acute or chronic disease independently of any connection with the brain or it may be the direct result of cerebral disorder life being terminated by an apoplectic attack. — or by the slow progress of paralysis. It is a singular fact that persons labouring under this disease

may suddenly arouse from their lethargy and resume their usual mental activity with or without a complete return of reason. Dr Earle relates the case of a young man brought for insanity into an asylum under his care, who had sunk into a complete state of lethargy and apparent Dementia. He was for several weeks without speech, and several months without voluntary locomotion, but he suddenly aroused himself from his seeming fatuity and the Doctor was first made sensible of the change by seeing him in the midst of a circle of the inmates of the house convulsing them with laughter by his antics and witticisms. In such cases Dementia may only be apparent or the result of some insane determination but such was not the case with this young man for he subsequently relapsed and fell into the same state of Dementia as before. The existence of derangement of the emotional functions distinct from the intellectual has long since been admitted

Pinel called attention in 1731 to a form of this
disease which he named mania without delirium
Numerous examples of this affection are given by
Dr Rush under the name of moral insanity
in his treatise on diseases of the mind published
in 1812. Dr Prichard who also wrote a work
on the subject now before us defines it to be a morbid
perversion of the feelings affections and active
powers without any illusion or erroneous conviction
impressed upon the understanding. There are
numerous individuals to be found everywhere
in society affected with the disease now under
consideration whose sentiments and conduct
are so peculiar as to attract general attention
but who can reason so well upon all subjects
within their capacity and whose intellect is
often so clear in many instances, even shining,
that no one would suspect their sanity
They are said to be singular or eccentric.
Now the fact is that such persons are as much
under the control of their morbid feelings

and not as continuing in obedience to these feelings as do the maniacs who are not considered morally responsible for their crimes. Such persons should be considered as insane, but it is a difficult task to draw a line between sanity and insanity without passing the limits of eccentricity. But the same difficulty is experienced in distinguishing sanity with from disease. The case may be considered as passing within the province of insanity when the conduct of the person materially interferes with the safety of those around him. The judgment may be much assisted in the consideration of the cause. If a marked change in the individuals conduct or feelings can be traced to any particular period in which any thing transpired that was calculated to disturb his mind, or of the affection can be traced from any of his ancestors, it may be reasonable to suppose that the complaint is Insanity

It must not be understood that patients affected

with moral Insanity may not form erroneous Judgments. They, like all others under the influence of strong feelings of any kind are liable to be warped in the formation of their opinions, but these are not so absurd or of a character to exhibit any peculiar deficiency of reasoning power.

The disorder may be exhibited in the condition of the feelings in general, or with reference more especially to some particular passion. Sometimes it consists of general excitement. The patient is exceedingly cheerful without a cause; cheerful however, forms projects entertains greatly speculative ideas, makes large purchases or lives in a constant state of spiritual exaltation. The reverse is sometimes the case the patient being equally depressed, every thing being viewed as it were through a cloud of darkness. He can see no pleasure in store for him and is apt to be desiring solitude and moody, and occasionally retires for months or even years from society. They are in general very irritable, the least opposition

apt to excite them to the extreme and while ungovernably enraged they frequently commit acts of which in their cooler moments they repent and for which they may apologise but which are repeated again under similar circumstances. Public opinion seems to exert a favorable and powerful influence over their actions. So also does fear of personal consequences. When the above restraints do not exist and they have their full sway they seem to delight in using their insane authority to abuse or even strike a fond parent or near relation or freind. Not satisfied with this they will make use of the most profane and abusive language in ridiculing them without a cause. When there is powerlessness at the same time, they rave, scream and use all kinds of frantic gestures in the violence of their impotent rage. These are the most prominent Symptoms of this species of Insanity. They are quite knavish with respect to the community. They often admit that they act wrongly when excited, find plausable excuses, and sometimes make

it appear that they are persecuted individuals. The disease may assume the form of suspicious jealousy or it may appear as complete loss of moral sense so that the patient may defraud or commit atrocious crimes without the least moral conviction of his guilt. They seem to take much delight in inflicting pain and torment on those around them when they have it in their power. The passions of love or sensual propensities are liable to mad excess, and in some cases lead to fearful acts. As observed by Dr. Pritchard, in this kind of Insanity there is apt to be a disregard for others, great selfishness, and at the same time want of decent reserve in many instances in regard to the patients affairs and difficulties, arising from an inability to appreciate the feelings of others or to suppose that they are different from their own.

Some patients have an irresistable propensity to abuse alcoholic drinks. The use of alcohol with such is paroxysmal. This affection often terminates in mono-mania.

Mono Mania. This expressive title was proposed by Esquirol who applied it to all those cases that are characterized in one direction or on one or more subjects in the same direction; but the phrase is now used in its widest sense, embracing all whether cheerful or sad, so that it is limited only to one in number as the name implies. Both the same time the disease may have its choice of the many single directions. This form of Insanity is the most common and is free from delirium. It is called Hypochondriasis when the hallucinations relate to the patients own body or to the circumstances which he conceives to exert an especial sinister influence upon his affairs in general. Moral insanity of Dr. Prichard has been included by Esquirol under monomania. There is a great difference between the two cases. In the first there is reason: in the latter, a want of it. A proper view of this subject is important, both in a therapeutical and medico legal point of view, for if intellectual delusion is made a necessary

ingredient of insanity many curable patients are through neglect to pass from moral delusion to mania, and many such patients are either imprisoned or hung for their crimes who would be much more appropriately sheltered in a lunatic asylum. A mono maniac in the true sense of the term was met with in Lancaster a few years since. The patient was a foreigner by birth and barber by trade who continued to occupy himself regularly and cheerfully with his customers and converse rationally upon all subjects except his own fortune and the unusual conspiracy among his neighbours to poison him. He carried his own victuals and regularly every morning went about a mile to the river Conestoga to supply himself with water which he asserted could contain no poison since the fish continued to live in it. In monomaniacs there are certain discernable peculiarities which make them differ from most persons and beyond mere eccentricity. There seems to be a graduation of insensible from eccentricity to mono-mania and

from monomania to mania. In many cases of
mono
mania there is a morbid excitation of some one or
other of the passions. This is where Esquirol thought
the resemblance was between mono-mania and moral
insanity. It is a well known fact that mono-
manics have less or more consciousness of their real
condition. Hence they frequently exhibit great
ingenuity in masking from the public their illusions
until at length they get the mastery over their
judgments. It will then be discovered that they
have been cherishing those delusive passions for
a long time while mingling unsuspected in
society. The character of the insanity may depend
on the previous dominant passion, and frequently
also be influenced by the original cause of the
affection. Morbid pride or ambition will excite
a powerful change on the mono-maniac. It will
often make of him a President, Governor, or Nicholas,
and sometimes even personal identity is lost and
he becomes a particular personage who may
happen to occupy the attention of the people

at the time of his delusion. Thus there were many Napoleons, Washingtons, Taylors and Scotts during their respective careers. Some believe themselves to be transformed into inferior animals. Others imagine that they are converted into tea, plant pots, clocks, candles, glasses, waxen candles butter &c and dread the fire in consequence of their conversion. The following lines by Pope gives a sufficient enumeration of these singular hallucinations

"Innumbered things on every side are seen
Of forms changed by various forms of spleen
Here living tea pots stand, one arm held out
One bent the handle this and that the spout
A pipkin there like Homers tripod walks
Here sighs a jar and there a goose pie talks
Men prove with child as powerful fancy works
And maids turned bottles call aloud for corks."

There seems to be no limit to these various hallucinations. A patient came under the notice of Dr. Evans of Maryland some time ago, of whom I will

speak before ending this chapter. This patient conceited that he was a Grid Iron and thought the persons around him kept him continually on the coals covered with fish, to his great displeasure. I am acquainted with an individual who after visiting Washington in the winter returned home with the full expectation of being our next President, he being an illiterate monomaniac.

Insane Impulse. The existence of this form of insanity connected with moral insanity has been doubted by many able writers but cases occur at intervals which can be explained in no other way. Persons who are effected by this malady are suddenly seized by some unaccountable propensity to do some insane act without motive or object appreciable by themselves or others. Sometimes they are seized as it were by surprise and rush headlong to the act in obedience to the impulse, so that they have apparently no time for resistance. This is not always. In some instances it is more gradual, they being able to

restrain their insane passions for a time, but finally
giving way to them if not relieved by proper remedies
Persons who have looked down over a precipice
and have experienced a shudder to come over
them when the thought of voluntarily throwing
themselves into the abyss beneath has forced
itself upon their minds can form some feint conception
of the mental disorder in cases of insane impulse
Unlike mono-mania it is not limited to any
particular acts or to any number. It is most
striking when it takes a violent or illegal direction
as in case of homocide, personal assault, suicide
theft &c. Suicidal mono-mania is peculiarly
distinct from Suicidal impulse, but in the former
there is generally a motive, while in the latter
there is none, and if the patient kills himself it
is generally by accident. He may jump out of
a window thinking it a door, or may rush
with some danger fearing no injury. As above
stated the Suicidal mono-maniacs always have
a motive, but which is not always discernable.

some may imagine they have committed the unpardonable sin or consider it a moral duty to make way with themselves, others in order to escape disgrace, punishment, physical suffering &c. Their designs are carried into effect in different ways by drowning, hanging, pistol, razor or poison. They frequently evince surprising ingenuity in accomplishing their designs in spite of the watchfulness of their friends. Dr Brigham states of 120 patients admitted into the New York State Lunatic Asylum 15 or between a seventh and an eighth of the whole number were disposed to commit suicide.

Organic derangements of various kinds, have been discovered in persons who have died insane, which depend most frequently on the supervention of other diseases which had no direct connection with the cerebral affection. Anatomists of former days seldom detected lesions on maniacs post mortem examinations but it is altogether probable that the Anatomists of those days were not so particular in their examinations as they are now or they would have discovered the

morbid state of the encephalon in the greater number of cases. It has lately been stated that there is no trace of lesion to be found in persons who have died of mania. If there are any such they are extremely rare. Esquirol relates the case of a young woman killed accidentally in a state of recent mania in whom no lesion was discovered in the brain or its appendages; but by more recent anatomists among whom may be mentioned Georget, Bayle, Calmiel Delaye Forille, Pinel, Granchamp and others all concur in the discovery of lesions in the brain or its appendages, after the decease of Maniacs.

Where paralysis is connected the medulary substance is hardened. The following is a summary of the most striking cephalic phenomena which have been noticed in connection with insanity. The cranium is often thickened and either resembling ivory or sponge. It is also altered in form. The membranes are frequently diseased. The dura mater is occasionally thickened and adherent. The cranium is enlarged and opake with false

membranes in various stages of development within its cavity attached to its surfaces. The Pia mater is also enlarged and infiltrated with blood or or serum and presents to the view various hues It also becomes firmly attached to the brain. It is occasionally observed to be softened. In advanced stages the bulk of the brain is said to be diminished Cavities are sometimes found in the cortical substance resulting as supposed by M. Foville from extravasation but according to Dr Sims from softening. Both Serous and sanious effusions have been noticed in the different cavities of the encephalon. In fatal cases the gray substance is generally diseased. In cases connected with paralysis the white and medullary are noticed to be preternaturally hard. There are numerous lesions found of which I make no mention

Predisposing causes. In the great majority of cases Insanity is produced by exciting causes acting on a predisposition to the disease Inheritance is a frequent source of predisposition

Even a particular form is often inherited and the disease is apt to come on at the same period of life in the parent and offspring. It is said that children born before the attack of Insanity are less liable to be affected than those born after. Time of life has much influence over the susceptibilities to Insanity. According to most European writers the period of greatest susceptibility is between thirty and forty. In this country according to official reports the period is between twenty and thirty. Sex does not seem to have any decided influence. According to Esquirol women are more subject to the disease than men. It is true that women are more excitable and less able to bear the influence of exciting causes than men; but according to subsequent researches there seems to be a predominance of men. It is a well known fact that men are more exposed to the direct causes of the disease. The natural constitution of the individual often predisposes to Insanity. Individuals of nervous or melancholic

temperaments are peculiarly liable to the disease
Persons who have any strong passion in excess
as ambition, pride, or love of applause are also
liable to an attack. The poor and ignorant are
less liable than the rich and learned. Celibacy
appears to favor the inroads of Insanity. From the
reports of the different hospitals in this country
it appears that the great majority of the insane
inmates are unmarried. It is possible that
such persons are more exposed to exciting
causes, such as agitations and frequent
disappointments of the tender affection to which
such persons are exposed. The professions or business
of men, have a great influence over the number
of Insane. The proportion is vastly greater among
the classes whose brains are kept in a constant
turmoil either of passion or of intellect, than
among those who pursue a tranquil course
of moderate industry and enjoyment, such as
the life of the farmer. One attack of Insanity
may always be considered as a predisposing

cause to another &c &c.

Exciting Causes. Whatever tends to increase diminish or in any way distort the regular supply of blood to the brain may act as an exciting cause of insanity in the predisposed. The exciting causes are divided into moral and physical of which the former is by far the most frequent, of all those cases are left out of the question which result from other diseases such as apoplexy, epilepsy, and the febrile diseases, Of the moral causes, among the most common are excessive mental excitements whether intellectual or emotional, such as severe study, metaphysical investigations, struggles for power, wealth, influence &c Religious and political excitement anger jealousy, hatred and revenge are all excitants when carried to the extreme. Physical causes are isolation injuries to the head, Intemperance, transfer of rheumatism or gouty irritation the suppression of. wonted discharges, change of life in women, the puerperal state, retrocession

of suppuration the healing of old ulcers, or in fine any thing that is calculated to ~~effect~~ morbidly excite or depress the functions of the brain may act as an exciting cause of Insanity in the predisposed. As to the nature of Insanity little is very little known. We may say that it generally depends upon the state of the circulation system at the time of its attack, it is only owing to a morbid excitation or depression of the functions of the brain, Diagnosis &c. The complaint with which Insanity in the form of acute mania, may be the most easily confounded is acute meningitis. In many cases the difference is scarcely discernable but generally there is no difficulty in diagnosing on account of the acute meningitis being confined to the membranes of the brain, and its attacks are more violent, while in Mania the substance is often deranged to a greater or less degree the former is shorter in its duration and more frequently ends in speedy death. Another

affection with which Insanity may be confounded is the delirium of fever. There is little or no difficulty here in making the distinction. There are precursor symptoms in Insanity while in fever the attack is abrupt. It may also be confounded with delirium tremens, but by learning the history of the case and forming from the patients appearance there is seldom any difficulty.

Under this head may be considered the general mortality of the Insane, the proportion of those who recover and the circumstances which authorise a favorable or unfavorable prognosis in any particular case. In relation to the mortality it is difficult to arrive at the truth from the reports of hospitals because in most of these Institutions the inmates are continually changing very few of the chronic cases like their termination in death. There is no doubt that even where insanity does not destroy life directly, it has a tendency to shorten it, Esquirol

estimates the mortality of maniacs to be one in twenty five annually. Monomaniacs one in sixteen and of Dementia one out of every three About one third of all who are attacked of insanity recover from under treatment at the common hospitals but of subjected to early and judicious treatment long persevered in from fifty to seventy five per cent may recover. There are generally more recoveries the first year than the second, and more the second than the third &c up to ten years after that they seldom recover.

Treatment. In relation to the treatment of insanity the first question of importance is whether the ~~treatment~~ patient should be treated at home or not. This question may with great propriety be answered in the negative because persons affected with insanity are apt to contract aversion for their nearest friends and relatives. Instead of being soothed by their kind attentions they are often excited and irritated by them. Secondly most folks as home are destitute of

knowledge and remedies and therefore without any further reasoning it is proper as a general rule to send the Insane to the properly conducted public Institutions where knowledge and remedies can be had for the ease and comfort of all. After settling the above question the first thing to be done is to ascertain the cause and remove it. Secondly the correction of all physical disorder and lastly the restoration of the perverted functions of the brain. A knowledge of the cause may contribute to a better understanding of the case. If it be impossible to remove the cause remove the patient from under its influence untill health is restored. It may lie, as it were, in wait for any returning glimpse of reason prepared to strike down his victim as he rises..

<u>Removal of the Physical disorder</u>. In the early stages of the disease if the symptoms put on the character of acute meningitis there should be no hesitation in resorting to an antephlogistic cause

of treatment proportionate to the inflamatory symptoms; Bleeding both general and local, active purging, and cold to the head. If there is any tendency to a comatose condition a blister should be applied over the whole scalp and mercury given with reference to its alterative effect on the system. These are the chief remedies. There are very few cases in their commencement that exhibit symptoms of acute meningitis, but in most cases if there is evidence of inflamation at all it is generally of a milder character and requires less energetic treatment. In cases where there is much vascular excitement, purging has always been a favorite remedy with most practicioners. It was much employed by the ancients. The use of Hellebore passed into a proverb in the treatment of Insanity. This in connection with the Lancet & blister constitutes the important remedy in cerebral inflamations There is a very great variety of purgative medicines used in Insanity as well as Hellebore such as

calomel, extract of Colocynth, the compound cathartic pill, Sena & salts jalap &c Bitartrate of potassa Rhubarb and Aloes are recommended in those cases where there are debility and constipation with little or no vascular excitement. Where there is much vascular excitement another set of remedies come into play such as antimonials refrigerant & diaphoretics: Saline may be also used in conjunction with the warm bath. During the febrile paroxysms much good may be expected from seating doses of tartar emetic or Ipecacuanha in doses of from 1 to 3 grs of the former to 10 or 12 of the latter every three or four hours until there is a remission of the Symptoms. Removal of the hair and the application of a blister to the scalp, or Ice, in such cases prove of much service. A stream of cold water is also used. Some recommend Setons, Issues &c applied at the back of the neck and on the scalp, especially over the Sagital suture. If Insanity is complicated with any other disease, as Dispepsia, Chronic gastritis or [illegible] they should be treated according

to the indications without respect to Insanity. Want of sleep is one of the most prominent and distressing symptoms of Insanity. This State of things should never be neglected. Opium, blisters applied to the temples or epigastrium, fatiguing exercise during the day &c. Nervous Stimulants such as Assafetida, Hoffmans Anodyne, Camphor Valerian &c &c. If Opium disagrees with the patient, Hyoscyamus or Conium may be substituted for it in larger doses. There may be benefit expected from the use of Chloroform in cases of debility. Alcoholic Stimulants and Tonics are also of use. Puerperal Mania is treated upon the same general principles as other forms of Insanity, excepting that it requires more care in regard to depletion. The patients seldom, if ever, fear the use of the Lancet or of Opium and the other narcotic Stimulants. Due attention to the condition of the alimentary canal in connection with local bleeding, blistering and the application of cold to combat inflamation, is all that is necessary to be done in such cases.

In excitement of the venereal propensities something may be expected from the use of antaphrodisiac remedies of which Duleamera freely employed is the best. Gout or Rheumatism with which Insanity may have alternated should be invited to its original seat by hot water, blisters, rubefacients &c. If the disease has followed the cessation of any discharge attempts should be made to reestablish the discharge by appropriate means. As to diet and regimen there is no special rule. The patient must be nourished according to his physical condition without respect to his mental disorder. Sometimes they refuse to take food with intent to commit suicide. When such is the case it is often necessary to inject broths of various kinds into the stomach or rectum. They may however sometimes be induced to take food when it is left within their reach. It seems that they can bear hunger but not thirst. Throughout the course of the disease the Physical disorder should be treated according to the particular circumstances of each case.

The correction of the perverted cerebral function.
In the foregoing history of the disease it has been maintained that after the subsidence of the original physical disorder of the brain, it may be left with a perverted mode of action without any inflamatory complication whether acute or chronic, or any other appreciable organic derangement. It is true that sometimes the whole complaint from the very commencement consists in perversion. How to reach this condition with physical means would seem almost impossible. We may impress the brain in various ways by medicines but we cannot find in the Materia Medica a mental restorative. Physical remedies put physical structure in order. Consequently we have in a basic manner to expect good from those means which exert certain favorable influences over the perverted cerebral function. Instead of leaving the operations of the mind to the caprices of accident. Consequently we must aim at so arranging exterior influences that the suggestions shall be favorable to correct thought and feeling. There is one class of cases of physical

remedies which aid us very much in the fulfilment of this indication. I allude to Narcotics, of which opium is the best. They seem to act in two ways: first by allaying irritation and producing sleep, and secondly by obtunding sensibility of the brain and rendering it less susceptible to morbid impressions. In the treatment of moral insanity, proper regulation of personal intercourse is of great importance. The deportment of persons towards the patients should be the same as if he were in health. Nothing should be said to wound his feelings, and conversation on the subject of his delusion should be avoided. The mind and body should be regularly employed so far as to be conducive to the health of each. Different amusements are also very beneficial. Public Institutions have great advantages in the fulfilment of these indications. It is also necessary to enforce restraint upon such patients as are otherwise uncontrolable.

An

Inaugural Dissertation

on

Typhoid Fever

Submitted to the Examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

By

Herman Felton Perry

of

Canton St. Lawrence County

New-York.

To

J. Robt. Ward, M.D.

of

Clear Spring, Md.

&

Samuel Chew, M.D.

Prof. of the Theory & Practice of Physic in the University of Maryland,

This Dissertation is gratefully & respectfully

inscribed,

as a testimony of esteem for their uniform friendship, their virtues & professional attainments,

By

their sincere & affectionate

friend & Pupil,

W. F. Perry.

# Abdominal Symptoms.

[illegible]

[illegible] symptoms as [illegible] to the tongue, appetite, & thirst, we have been somewhat com-mented upon this division of our subject, & as the [illegible] of which have been noticed to some extent, we shall not attend to them again, but proceed, at once, to notice the other symptoms properly included under this head. And, first, as regards the Mouth, we find the mucous membrane sometimes of a [illegible] red, & at times of a dark red appearance, the teeth often covered with [illegible] [illegible], [illegible] [illegible] [illegible], [illegible] [illegible] [illegible] [illegible] [illegible].

Nausea & Vomiting are very frequently [illegible] during the course of an attack of Typhoid Fever, & when it does occur, it is frequently a source of considerable [illegible] [illegible], both to the patient & physician. It may arise at any period of the disease, but it occurs most frequently [illegible] the [illegible] [illegible] [illegible], [illegible] [illegible]

abdomen

Glands of Peyer

# Diagnosis.

[illegible] a case of typhoid fever, it is sometimes [illegible] [illegible] to [illegible] positive distinction between it & many other diseases to which it is so nearly allied. Its nature is, in a great measure, hidden & concealed. There is, in the early history of many kinds of [illegible], [illegible] [illegible] symptoms presented, the diagnosis is somewhat uncertain. The disease to [illegible] it [illegible] [illegible] [illegible], & the one with which it is most [illegible] to be confounded, especially in the [illegible] [illegible], [illegible] [illegible] necessary that a proper distinction should be made, is typhus fever. The relation between them is strikingly [illegible] [illegible], [illegible] [illegible], [illegible] [illegible] [illegible] them. Dr Gerhard of Philadelphia, [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] to a case of each, & a comparison of [illegible]

After a week.

discontinued, this should be done gradually, Of the tonics that may be used, the use of Quinine, & [illegible] beneficial, & are probably the best, their use is not [illegible] but should be withheld until vascular excitement has been removed. These have been thought by some practitioners to possess the power to cut short the disease, this is [illegible]

When perforation of the intestinal canal occurs, large doses of Opium have been recommended by Drs Graves & Stokes of Dublin, & is probably the best course of treatment that can be adopted.

Inaugural dissertation

on

# Pneumonia,

respectfully submitted to the examination

of

The Provost, Regents, and Faculty of Physic,

of the

University of Maryland;

for the

Degree of

## Doctor in Medicine,

by

William Christopher Wiseman

of

Maryland.

Balto. Feb'y 14th 1855.

The disease here briefly considered, was selected as the subject of my thesis, from the long catalogue of maladies to which man's body is prone, for various reasons; among which the chief are, the frequency of its occurence, its importance, the intimate knowledge we possess of its natural history, the accuracy (in the great majority of cases) of diagnosis, and the power which judicious treatment influences over its course and progress. The disease is inflammation occuring in an organ of delicate texture, and of vital importance to the economy, and although we are yet ignorant of the

essential nature of inflammation, yet its effects are well known to us. Occuring in the lungs, we cannot only discover its effects after death, but by the brilliant discovery of Laennec, we can almost as accurately determine them during life, as though revealed by the scalpel. Thus we are enabled to apply our Therapeutic means, with as much certainty, as though the organ were one whose condition we could examine by the eye. We can detect its incipient stage by appropriate signs, and thus frequently check its progress, or when it has progressed farther, we still can determine its extent and stage, and treat it accordingly. The influence of medical treatment has long since been shown, by the experiments of Louis and other distinguished physicians, which prove that it not only shortens the its duration, but that many cases

are saved, which would otherwise succumb to the violence of the disease.

I have not had the opportunities of making microscopical examinations of its pathological lesions, yet what is practically more useful to me, in the wards of the Infirmary, I have observed the general and local symptoms, and have listened to the physical signs, which mark its diagnosis. I have observed the influence of blood-letting and antimony over its earlier, and that of mercury over its later periods. I have heard the history of the disease detailed in the lecture room, and had its symptoms pointed out at the bed-side; future experience will determine, whether proper use was made of the instruction so zealously given, and whatever that may be, I can only say, that if I have not profited by it, the fault was my own.

# Pneumonia.

Pneumonitis, or Pulmonitis are terms synonymous with the above, used by different writers to designate inflammation of the parenchymatous tissue of the lungs. There are various forms of the disease, differing from each other in the extent and character of the inflammation, and the particular condition of the system, with which it may be associated. I shall here, however attempt to describe only the acute form of the disease, occuring in a previously healthy constitution. Writers generally, describe the morbid anatomy of the disease, prior to entering into a detail of its symptoms; considering this necessary to a full appreciation of the symptoms observed, and so I do not pretend to advance any thing original; but merely to fulfill a statute of the University, requiring each candidate for graduation, to write a Thesis, on some subject connected with medical science; I shall here follow the usual plan, and first describe the

Pathological Lesions. There are four different stages of the disease, each of which has lesions peculiar to itself. They are 1st The stage of engorgement, 2d hepatization, 3d purulent

infiltration, and 4th abscess. In the first stage, the lung is heavier than natural, but will still float in water. Its color is usually a reddish brown, the texture is denser, and it is more easily torn. It will still crepitate under pressure. When cut into, a frothy serum exudes, which, according to Williams, depends on the coagulation of the blood after death, as he did not observe it in cases, in which the blood remained fluid.

Hepatization. In this stage, on opening the chest, we first observe, that the lung does not collapse, as in health; when farther examined, it is found to be more solid than in the first stage; if a piece is cut off, and thrown into water it will sink, but the whole lung will still float; it does not crepitate on pressure, but it is softened, and easily torn; the finger can be passed through it with ease. When cut into, it closely resembles the liver in appearance, whence its name; the surface, in the majority of cases is marked by a granular appearance, which some suppose to be the air-cells filled with and obliterated by, a concrete fluid; others, Dr Williams among the number, suppose them to be portions of vesicles and minute tubes, having their tissues distended with an interstitial deposit-

of lymph. The color varies from red to brown or in some cases grayish brown.

Purulent Infiltration. The lung then is of a pale straw color when the stage is fully formed; the effused fluid or semi fluid of the second stage, has undegenerated into pus, which is diffused throughout. The pulmonary tissue is so softened, that the slightest pressure will break it down, and crush nearly the whole into a purulent fluid.

Abscess. This is exceedingly rare, and tubercular vomicae, or cavities produced by violence done to the lung in the post mortem examination, are often mistaken for true abscess. There is no doubt, that they occasionally occur. Louis met with five or six cases, and Andral. Chomel states that he has met with 3 cases two of which were proved by post mortem examinations, the other recovered, but there was no doubt of the existence of abscess.

Besides the above changes, we also find the mucous membranes of the bronchi reddened and softened, exhibiting the signs of inflammation. The different stages, which have been above described do not always occur distinct, but while one portion of lung may be in the first stage,

another may already have progressed to the second stage &c. The duration of the different stages varies, in one case the first may last six or seven days while in another the third stage may come on in 36 hours; depending very much on the intensity of the inflammation, the constitution in which it occurs, and the other attending circumstances. But the most modifying circumstance, is the medical treatment; by this, if proper, the first stage may be prolonged, and the others prevented from occurring.

Symptoms. The onset of pneumonia is very variable; in some cases the prodromatous symptoms are those ordinarily announcing a febrile attack, as general malaise, a feeling of lassitude, languor &c; other cases commence at once with fever, attended by cough, and pain in the chest; others again commence as ordinary catarrhs, or slight attacks of bronchitis. The duration of the premonitory symptoms varies from a few hours, to even, in extreme cases, one or two weeks. One writer, Dr Williams lays great stress on the occurence of a chill in the commencement of

the disease; and, to quote his words he says, "except in intermittent fever and puerperal peritonitis, pneumonia is, of all acute affections, that most frequently accompanied by a chill at the commencement." Other writers do not lay so much stress on this, and I believe, this symptom is as often absent as any other. Fever is present in most cases, its severity varying, and when fully formed is generally accompanied by more or less pain, cough, dyspnoea, and a peculiar rusty colored expectoration. The pain is very variable, both in its seat and intensity, in most cases, it is rather dull, aching, or oppressing, than sharp, and acute as in pleurisy; and whenever it is very acute, it would lead to the suspicion that the investing pleura had become involved. Its general seat is at, or near the nipple, being situated deep in the chest, not superficial. The patient is sometimes only sensible of pain on taking a deep inspiration; when he feels a soreness, extending more or less over the whole chest.

Cough is nearly always present, if not in the beginning, it generally supervenes in the course of the first twelve

hours; at first it is slight accompanied by a scanty expectoration, but afterwards it becomes more frequent, and harassing, though never so much so, as in bronchitis. The pain is usually increased by coughing.

The breathing is always accelerated and rendered more difficult than natural. From the ordinary number of respirations in the minute -20-, it rises to 30 and 40 or even 50 in the minute, and in extreme cases it has risen even to 75 and 80, but these are rare. The dyspnoea is not always in direct proportion to the amount of disease, as the feelings of patients often deceive them, some with a slight amount of disease, being almost breathless on the least exertion, while others having a whole lung hepatized, may not express half the amount of suffering. It is increased by any exertion, either by speaking, coughing or muscular exertion. The erect posture is necessitated in some cases, from the extreme urgency of this symptom; this, however, only occurs in the later stages.

The expectoration is at first only slight, being only the ordinary mucus slightly altered by disease, but in a short time, varying from twelve hours,

to two days, it becomes more viscid and slightly tinged with blood. until, when the disease is fully formed, we have the characteristic sputa; which are semitransparent viscid and of a dirty red, or rusty brown color; frequently they look as though brick dust had been incorporated with the sputa. It is very tenacious, so much so, that the vessel may be turned upside down, and it will not flow out; but adhering to the sides of the vessel, it looks like a tremulous jelly. The sputum is never very copious; it retains the characteristic appearances during a period varying from two to five days, rarely longer; towards the end of the disease, it becomes like the sputum of bronchitis, loosing its peculiar viscidity, and becoming yellow or greenish, and more copious. It then frequently presents a numerated appearance, like pieces of coin, in distinct, roundish masses. In some cases, the expectoration is very dark colored, looking like tobacco juice, or liquorice dissolved in water, and may become very copious this is generally a very bad symptom.

Fever always accompanies this disease, being symptomatic of the local inflammation, and is generally in proportion to its severity and extent. It is frequently remittent in type, having daily one or more exacerbations, which generally occur in the morning or evening, and while it lasts, the local symptoms are aggravated. At present the usual symptoms, the pulse is frequent, full and strong, and blood when drawn is buffed and cupped. The skin is hot and dry, the urine scanty and high colored, the secretions generally being lessened, the tongue is coated with a white or yellowish fur, there is thirst, anorexia, and the bowels are constipated, but in the last stages they are frequently affected with diarrhoea.

The patient generally prefers to lie on his back with his head and shoulders elevated, but in some cases he lies on the affected side, leaving the other free and unencumbered.

Physical Signs. On applying the ear to the chest, at a very early period of the disease, when the congestion is incipient, the ordinary respiratory sounds are heard; but somewhat rough and harsh, as though the air cells were dry, and deficient of secretion, but soon afterwards we hear the ordinary sounds, becoming less distinct, and gradually superseded by the crepitant ronchus; this is at first heard only at the beginning of inspiration, but soon it is heard during the whole of that movement, and entirely supersedes the healthy murmur. This sound, the crepitant ronchus, is always diagnostic of inflammation of the lungs, whenever it is heard. But unfortunately, inflammation may be present, in some rare cases, and we may not be able to hear its characteristic sound, because the inflammation occupies a central portion of the lungs, and is everywhere surrounded by healthy structure. These cases are fortunately rare.

Percussion in the first stage yields no very decisive sign, the dulness is not yet complete, but on carefully comparing the sound elicited on each side, we will become aware of a slight degree of dulness, and what is of more importance at this period, the finger used will experience a greater degree of resistance on the diseased side, than on the healthy one. The walls of the chest are not so elastic over the inflamed portion of lung, as over the healthy lung.

When the second stage has been fully established, and the ear is applied, we find that the crepitation is gone, as is also the respiratory murmur, and the only sound heard is that of bronchial or tubal respiration, being the sounds heard in the larger bronchi which are unaffected. If the patient be directed to speak, while the ear is applied, his voice will be heard with greater distinctness than in health, owing to the condensed lung being a better conductor of sound than the healthy lung. If the hand be applied

to the chest, a greater degree of fremitus will be experienced than in the healthy state. In this stage percussion yields a much more satisfactory sign, than in the first; a well marked and perfect dullness will be found, as far as the disease extends.

The third stage has no physical signs peculiar to itself, the dullness on percussion remains the same, and the only sound heard, is the bronchial respiration unless there is abscess, when a gurgling may be heard immediately over it, and if empty, probably pectoriloquy and cavernous respiration.

If the disease is arrested in the stage of congestion, the healthy respiratory murmur is gradually restored, and the parts return to health. If there is complete hepatization, the bronchial respiration and bronchophony will gradually cease, and crepitation will return, but it is usually somewhat modified and is called crepitation redux; this will gradually give way to

the healthy murmur, and the pt returned to health as in the previous case.

The complications of pneumonia are various, the most frequent are the other inflammatory diseases of the chest as bronchitis, pleurisy, and pericarditis. When the bronchitis is extensive and severe, it is the primary disease, pneumonia having occured secondarily by extension of the inflammation. If the inflammation is near the surface of the lung, it is rare that the investing pleura is not implicated, and then we have pleurisy, more or less extensive, complicating the case. The pericardium is attacked by extension of the inflammation, and consequently is most frequent, when the pneumonia is on the left side. In typhus fever, we have a low form of pneumonia which is caused by the mechanical congestion of the blood, as the patient lies on his back. It sometimes supervenes, in the course of the exanthemata. The brain and its membranes,

are in some cases inflamed, and if the physician is not on his guard, he will be apt to overlook the disease in the chest, and merely treat the disease of the brain, whose symptoms are more obvious and more urgent. In hot climates, and in miasmatic regions, hepatic diseases are a frequent complication.

Diagnosis. A careful examination and comparison of the general symptoms, and physical signs, will, in nearly every case render the diagnosis easy and correct. Yet there are some diseases which sufficiently resemble pneumonia, to mislead the young beginner, or careless observer. Bronchitis extending to the minute bronchi sometimes resembles it; but they are distinguished by the expectoration, which, in pneumonia is viscid, tenacious, and uniformly mixed with blood, giving it the characteristic tinge, while in bronchitis it is thinner, not so tenacious, and if blood be present at all it is in streaks. When the time crepitant ronchus is

heard only in pneumonia while in bronchitis, we may have the subcrepitant ronchus, but never the crepitant. When the second stage of pneumonia is established, all resemblance between the diseases is lost. Pleurisy with effusion may present some resemblance to pneumonia, but it is distinguished, by the more acute pain of pleurisy, the sputa of pneumonia, and the physical signs. Crepitant ronchus, and afterwards bronchial respiration, and bronchophony in pneumonia, and friction sound and aegophony in pleurisy. In both there is dullness on percussion, but while in pneumonia it is stationary, in pleurisy it shifts about with the movements of the patient. Vocal fremitus is absent in pleurisy, but is very evident in pneumonia. The intercostal spaces also bulge out in pleuritic effusion, which they never do in pneumonia. Pulmonary oedema is diagnosed by the absence of all acute and febrile symptoms, and it is generally accompanied

by oedema of the face, or other parts of the body. From some cases of phthisis, and inquiring into the previous history of the case will be sufficient to diagnose.

Prognosis. This is influenced by many circumstances attending each case, such as age, the seat and extent of the inflammation, the period at which it is treated, the manner of treatment also, the complications, and the previous habits and state of health of the patient. The young are more apt to recover, than the old; the most favorable period is between six and twenty-one years of age; after this the danger is increased up to fifty, when it is very dangerous, and nearly always proves fatal. There is more danger when one whole lung is inflamed, or when both are inflamed; and inflammation of the upper lobe is more fatal than that of the lower. The sooner active treatment is employed, the more favorable, (Caeteris paribus.), is the prognosis; if it is arrested,

in the first stage, the prognosis is very generally favorable; if the second stage have supervened it is not so favorable, and still less so if the third stage is established. The average proportion of deaths is 1 in 13, The prognosis is also materially altered by epidemic influence; some epidemics are very fatal, nearly every case proving so; such an one occured during the last winter, in the lower counties of our state.

The average duration of the different stages is, according to Laennec, from twelve hours to three days for the first, from one to three days for the second, and from two to six days for the third; but it is evident that the duration of the different stages is various, being lengthened or shortened by the numerous modifying circumstances attending each case. The whole disease generally lasts from ten to twenty-one days, but it may be much shortened by active treatment early employed.

Causes. They are both predisposing and exciting. Age and sex appear to have but little influence, since it occurs at all periods of life and in both sexes. It is however most frequent between the ages of twenty and thirty years, and occurs oftener in males than in females, because they are more exposed to the exciting causes. It is very frequent and fatal in old men, about sixty years of age.

A previous attack of pneumonia, the other inflammatory diseases of the lungs, and diseases of the heart and its appendages are all causes of this disease. Cold, damp, irritating vapors, violent exertion, and penetrating wounds of the chest, are the most common causes. It is a frequent attendant on other diseases; it is present in nearly every case of phthisis, at some period of its course, and is one of the attendant complications of typhus fever. In children, it frequently occurs during hooping cough, and the exanthemata. It appears, by a recent publication, (Dr Thos. H. Buckler, on

fibrous bronchitis and rheumatic pneumonia, that rheumatism is sometimes transferred to the fibrous tissue of the bronchia, from whence it extends, either by contiguity, or by continuity, to the parenchyma, and gives rise to pneumonia. It is most prevalent in cold climates, and during winter and spring. Epidemic influence sometimes causes it; when it is of a very fatal form.

Treatment.

The indications for treatment, vary according to the stage of the disease. When the patient is seen in the first stage, the indication is, to subdue the local inflammation, and moderate the general excitement. The best remedy is venesection; if used early in the disease, we may hope to conquer it by this alone. It is a direct arterial sedative, calming the tumultuous action of the heart and arteries, and moderating their force; it is an indirect sedative to the nervous system, and by lessening the amount of blood

in the body, there is more room for the inflamed lungs to do, giving them in some degree that rest, which is so essential in the treatment of other inflamed organs. The quality of the blood is also altered by venesection; by the loss of the red corpuscles it is rendered less stimulant, and by the diminution of the contents of the blood vessels, absorption is promoted, and secretion re-established. In regard to the quantity of blood to be taken, we must be guided by the force and strength of the pulse, the general condition of the patient, his previous health, and the amount and stage of the inflammation. But we should not in all cases, implicitly rely upon the pulse, as sometimes, when the congestion occurs suddenly, the nervous system is for a time overwhelmed by the shock, and presents an appearance of debility which is far from real. It is of the utmost importance to make a correct diagnosis between a real, and an apparent

debility, as in the former case, bleeding would be fatal, while in the latter, the pulse will rise under its use, and reaction will be hastened, yet still moderated.

From sixteen to thirty ounces is the average quantity, that may be taken at the first bleeding; in most cases, it will be sufficient, especially when aided by local depletion, but it may be repeated as often as the pulse requires. It should be performed in the sitting or standing posture, and from a large orifice. In doubtful cases, where it is difficult to distinguish apparent, from real debility, it is safest to open a vein, and let a small portion of blood flow, should the debility increase, stop the flow.

The vascular excitement having been reduced by the loss of blood, the bowels should be cleansed by an active purgative, calomel combined with some other cathartic. To hasten its action, is probably

the best. The medicine subsequently administered will be sufficient to keep the bowels regular. Tartar Emetic is the remedy which we may exhibit to the greatest advantage; in its effects, it approximates those of venesection; it moderates the force and frequency of the pulsations of the heart and arteries, it lessens the number of respirations, and calms the excitability of the nervous system. It also promotes directly and indirectly, the function of the various secreting organs. It may be given in doses varying from 1/2 grain to 2 or 3 grains repeated every two or three hours. The first dose usually excites emesis, but on repetition, a tolerance is established, which lasts a variable length of time; the duration of the tolerance depends on the greater or less difficulty experienced in establishing it; if it is easily established it lasts longer, and vice versa. Should the remedy irritate the stomach and bowels too much,

an opiate should be combined with it. A drop or two of Hydrocyanic Acid will enable the stomach to tolerate it much easier. It should not be too much diluted, nor should much food or liquid be taken into the stomach, while it is exhibited, as these all render it more irritating to the stomach, and prevent tolerance. It is best given, dissolved in a small quantity of some aromatic water, to which may be added some gum arabic.

Should the local symptoms, as pain and dyspnoea persist after venesection, local depletion will prove advantageous; blood may be taken by cups or leeches, applied over the seat of pain or between the scapulae. A large poultice may afterwards be applied. In addition to these remedies, after the vascular excitement has been reduced, an opiate may be given at bed time.

Turn over

When the second stage of the disease becomes established, the indication is to promote the removal of the effused materials. Mercury is the remedy which best fulfills this indication; given so as to produce its full effects, it alters the composition of the blood lessening the amount of fibrine, it promotes all the secretions, and exerts great power over the effused products of inflammation, by its powerful action on the absorbents. It should be given until its constitutional effects are shown by slight ptyalism. It should never be carried to profuse ptyalism, as the old notion, that ptyalism was in itself curative and beneficial, is utterly erroneous, it being merely the evidence, that the remedy is exerting its proper effects. Calomel is the best form, in which it can be administered; it is usually combined with opium and ipecac. The dose required varies, but

usually from one half grain to two grains
repeated every 2, 3, or 4 hours will be
sufficient. The quantities of opium and
ipecac also vary, according to the circum-
stances of each particular case. No
precise rules can be laid down, we
must be governed by our judgment in
every case.

Counter irritation is now useful;
a blister, corresponding in size to the
extent of the disease, should be applied
and if a speedy mercurial impression
is desired, the denuded surface may
be dressed with mercurial ointment.
As soon as resolution of the effused
products, commences, which is denoted by
the return of expectoration, we should
administer expectorants. the best are
Eupatorium, Senega, or Squill given
separately or combined. Carbonate of
Ammonia is also very useful.



Turn over

When the stage of purulent infiltration has commenced, the indication is to support by tonics, and stimulants, the vital forces of the system, so as to give time, for nature to remove the effused matters, which have now degenerated into pus, and to give the patient sufficient strength, to enable him to expectorate the bronchial secretion, which is sometimes so profuse as to threaten asphyxia. Antiphlogistics must now be laid aside, they are worse than useless. The general symptoms must guide us in the administration of remedies. If even as symptoms of debility appear, indicated by a rapid and feeble pulse, cold perspirations &c, we should give wine or brandy, and carbonate of ammonia. Wine whey is a very convenient form and useful form of stimulant. Eupatorium, serpentaria, and quinine or cinchonine,

are the best tonics; the dose must be regulated, according to the necessities of each case. Stimulant expectorants should be given at the same time. Gum Ammoniac, the balsams of Peru and Tolu, are the best. The mineral acids, especially the combination of nitric and muriatic, are useful in counteracting the deleterious effects of the purulent matters in the system.

Diet and Regimen. The diet should, in the early stages, be strictly antiphlogistic, and should consist only of farinaceous substances, such as thin arrow root, rice water, barley water &c. Even small quantities of these should be given, lest they interfere with the action of the antimony. In the latter stages, the diet should be more supporting and nourishing.

The room of the patient should be dry, airy, and of a moderate temperature

constantly sustained.

The above is a general outline of the treatment of pneumonia; it must be modified in each particular case to suit the circumstances attending it. No empirical rules should be blindly followed, but in order to practice rationally, each symptom and indication, should be carefully weighed and considered, and the remedies prescribed accordingly. The physician should constantly be on the watch for the numerous and dangerous complications, which are apt to arise; they should be treated on general principles.

W. O. Holman

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[illegible] of the pulse is increased [illegible]

Temperature of the skin, [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

delirium, but the excitation is very transient, after which excitation there is a subsidence, [illegible] of the intellectual faculties succeed, the individual is insensible to painful impressions is conscious of no feeling than that of a quiet and delightful [illegible]

[illegible]

These effects will continue from four to six hours. All the secretions [illegible]

( )

# Thesis.

on pneumonia

Written by

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for the degree of

Doctor of Medicine,

and respectfully submitted

to the

Faculty of Physic

of the

University of Maryland.

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# Introduction.

In accordance with one of the requirements of the University of Maryland, I am induced to present the following remarks upon pneumonia. In selecting this disease as the subject of my thesis, I have had the following objects in view, viz; to write upon a disease which will probably be of the greatest practical value to me in after years, one which the practitioner of medicine is likely to meet with at any time during the the colder seasons of the year; and from which none of my fellow beings around me are exempted. A disease which though sometimes mild and readily yielding to treatment, often baffles the skill of the most learned physicians.

Pneumonia Inflamation of the lungs - of all the textures composing the pulmonary substance in the part inflamed. It may be situated in one or both lungs, throughout their entire extent or occupy one lobe, or part only of a lobe of either the right or left lung - generally the right Inflamation of both lungs is not a frequent occurrence. The middle and lower lobes are much more frequently affected than the upper. The inflamation may be superficial or deep seated

Pneumonia may be divided into four stages The first stage is generally designated engorgement The substance of the lung is gorged with blood or bloody serum. The term splenization has also been applied to this condition of the lung. from its somewhat resembling the spleen.

To the second stage Laennec has applied the term hepatization, and most other writers have adopted the same name for this altered or solidified condition of the lung.

The third stage of pneumonia has been called by Laennec gray hepatization or purulent infiltra-

tion. - Andral denominates it gray softening - ramollissement gris. Thomas Wilson speaks of it as diffused suppuration of the pulmonary texture. The fourth is abscess.

If we examine the lung after death in the first stage or that of engorgement, we shall find it of a deep or dark red colour, the indentation of the finger is left quite distinct after pressure. It crepitates less than sound lung, and when the engorged portion is cut a red surface is presented to view, and a quantity of reddish and frothy serum flows from it. It is more compact and heavy than natural, less tenacious and floats in water. In this state the lung is more easily torn, more in this respect like the spleen, and hence the term splenization. The smaller bronchial ramifications may be seen of a deep red colour if examined.

The second stage is characterized by a deep red, reddish-brown, or grayish-red colour. The lung no longer crepitates under pressure. Its density is now so much increased that it will sink in water. The softening is so great that the lung may be

readily torn, and the finger may be passed through the parenchyma with little resistance, the cut surface is red or sometimes of a slightly mottled or variegated appearance, produced by admixture of the black matter of the lungs and of the interlobular areolar tissue, which is less red than the other parts. If the entire organ be involved in the disease, it will not collapse when the thorax is laid open, and will therefore appear to be increased in bulk. In lobules, the marks of the ribs are frequently visible. The texture of the lung in this condition is sometimes so rotten, that a moderate degree of pressure between the fingers will suffice to reduce it to a state of pulp; and this fact has made Andral quarrel with the term hepatization. In the third stage, the pulmonary tissue presents a reddish yellow or straw, or drab, or olive colour, or it is of a greyish hue, sometimes mottled with the red or black pulmonary matter. The granulations are gray, or whitish, and the texture of the lung is still more rotten and friable, pus from matter oozes out plentifully when incisions into the lung are made, or it may be squeezed out by gentle pressure.

The gray mass shows itself upon the cut surface in the form of minute drops. The more the lung is soaked in this fluid the more dry it and friable it becomes. When crushed between the thumb and fingers it is reduced to a yellowish gray pulp, very much resembling the fluid itself. And by gently forcing the finger in to the parenchyma a small cavity may be made which readily fills with pus, and might easily be mistaken for abscess of the lung.

The formation of an abscess of the lung, as a consequence of pneumonia is rarely seen. And it is a very remarkable circumstance, one which the researches of modern times has brought to light, Laennec saw only five cases in the course of 20 years practice and in the examination of some hundreds of dead bodies from pneumonia. Chomel saw three, Andral one, and Dr Chomel states that has been one, and that was in hospital practice. In opposition to this evidence abscess of the lung has been spoken of by some writers as of frequent occurrance. In making post mortem examinations after death the physician has not been perhaps as cautious

as he should have been, for indentation by the finger in mere handling the lung may readily be mistaken for true abscess, at least by the young and inexperienced anatomist. Abscess of the neighboring parts, as in the pleural cavities between the adhering lobes of the lung, in the mediastinum, liver, &c is occasionally open into the lungs, and form cavities in its substance. Tuberculus cavernosa, or dilated bronchial tubes seem to have been mistaken sometimes for true abscess, such purulent deposits are sometimes formed around tubercles, or foreign bodies lodged in the lungs. The abscess may be closed, or may communicate with the pleura, bronchia, pericardium, mediastinum or even peritoneum, or may open externally between the ribs.

Gangrene though rare does sometimes occur as a consequence of acute inflammation of the lungs. Sometimes it occupies a large portion of the lung — and sometimes it occurs only in a small portion. Laennec admits two varieties, diffused and circumscribed

The diffused is said to be exceedingly rare, M. Lawrence found only six out of sixty cases collected by him from various sources.
In the diffused the greater portion of one lobe or one lung is usually involved. The circumscribed generally occupies only a small portion of one lung, but is sometimes very extensive, in either case it is characterized by having a definite boundary. Laennec gives 3 stages: the first, that of recent mortification, the second, that of deliquescence or breaking down of the tissue, and the third that of cavity or abscess. Instead of opening into the bronchia, the cavity sometimes forms a communication with the pleura, into which its contents are discharged, and sometimes it communicates with both pleura and bronchia at the same time.

Symptoms – The first symptom commonly complained of is pain in the side, which may or may not have been preceded by a chill, or chilly sensations. Sometimes the pain is referred principally to the epigastric region. At the same time the breathing is constrained; and the patient coughs without

expectorating. At this period, by mediate or immediate auscultation, we are enabled to detect a slight degree of minute crepitation, mingled with the vesicular rustle; and the stricken thorax sounds well: and there is fever. These phenomena constitute pneumonia in the very onset of the disease. From the second to the third day, new symptoms appear; the expectoration hitherto absent or merely catarral, become characteristic, being at first moderately viscid, and having a degree of colour proportioned to the quantity of blood which it contains.

The minute crepitation increases, and drowns or supersedes the natural respiratory murmur. The clear sound produced by percussion begins to diminish on that side on which the crackling is heard and the pain is felt; and the pain is less sharp generally than in the begining. The dyspnea increases, as is quite apparent from the short and frequent inspirations made by the patient. If the pain be acute the decubitus is dorsal, the patient being unable to lay either on the sound or diseased side, in the first position

the pain is more acute, and in the second the breathing is more laborious. In this condition of pneumonia, though the disease may be severe, the inflammation is as yet in its primary stage. But should the crackling sound become predominant, if it should ultimately mask the murmur of respiration, we may be assured that the disease is about to pass from the first to the second degree, as the case proceeds the crackling sound is less and less heard, and finally is not at all heard in that part, and now either no sound is heard, or another morbid sound bronchophony supplies its place. And from this we may infer, that the lung is becoming or has become hepatized. In this solidified condition the lung becomes a better conductor of sound; and therefore the whistling, blowing, gusty sound of the breath, as it enters and departs from the larger bronchial tubes, which still remain open, is conveyed to the ear, and bronchial respiration is heard. But bronchophony, and bronchial respiration, are not always present in this condition of the lung; their existence and degree

many, according to the place and extent of the inflammation. When morbid sounds are most plainly marked, when the number and size of the bronchial tubes is involved in the hepatization are the greatest. They are therefore most audible in the upper or central parts of the lungs. when the inflammation is seated in those regions; and again bronchophony may exist, whilst bronchial respiration is entirely absent. in such cases however the hepatization is pretty general, and complete; so much so as to prevent the chest on the affected side from expanding. but when the lower portions alone are inflamed, or the inflamation merely superficial, or partial, they may not be heard at all.

As the case progresses, the breathing becomes more and more constrained, short, accelerated; the speech ceases to be free; the patient can do no more than pronounce a few interrupted words in a hurried manner. The sputa acquire such a degree of viscidity, that they can no longer be detached from the vessel by shaking it; the sound afforded by percussion on the side affected,

is decidedly dull, and rather no sound at all is elicited on application of the ear to the part; or bronchial respiration is heard; and bronchophony also is frequently present. The decubitus is still dorsal.

We never can say with absolute certainty that our patient is in the third stage of pneumonia during life, there being no certain means for making the distinction. We guess that the third stage is established if the face becomes pale and cyanotic. And a still stronger presumption in its favor is the occurrence of the prune-juice expectoration. The lung presents the same flatness on percussion and the same respiration sounds are elicited on auscultation. The supervention however of a mucous rale upon the bronchial respiration, might sometimes lead to the suspicion that the concrete exudation with which the cells are filled in the second stage, might have been replaced by the pus of the third stage. The expectoration in this stage generally diminishes in quantity, or ceases altogether in consequence of the debility of the patient, which disables

him from coughing up the peccant matter, his respiration becomes more difficult, is obliged to raise his shoulders elevated, & to have his shoulders depressed, or to maintain a hill sitting posture, the countenance becomes haggard, the pulse extremely feeble and rapid; the skin is bathed in a cold sweat, and death occurs, preceded by the rattling of accumulated mucus in the chest. while the mind often, often, remains clear to the last. such is the course of fatal cases, but more frequently the disease takes a favourable turn in the first or second stages.

To revert to the ordinary symptoms, should the disease yield to be cured in the congestive stages, as it sometimes begins to do in the second, third, or fourth day; the pain disappears, the expectoration becomes more copious, and more of the character of ordinary mucus, the frequency of the pulse, and other febrile symptoms diminish, the tongue begins to clean, and convalescence is soon established. Yet the disease may run on for two or three weeks before all the symptoms

disappears. A fatal termination seldom happens in this stage, and only when a large portion of one or both lungs is involved at once.

In the great majority of cases the first stage advances to that of consolidation. This comes on at a variable period from the commencement of the attack, but generally in from one to three days and seldom so late as a week. In this stage of the disease the patient often emits a rapidly, and dies from asphyxia. Yet frequently the disease takes a favourable turn, sometimes so early as on the sixth or eighth day. In that case the dullness on percussion diminishes; the bronchial breathing disappears; we hear a few, then more crepitation, then the natural respiratory murmur. The sputa again become natural, the dyspnœa and fever diminish, and then cease entirely, though not unfrequently the case is protracted to two or three weeks, and occasionally the relief is more or less of the symptoms for some time, such as cough, dyspnœa, pain in full inspiration, or a frequent pulse.

If however in the course of the disease an abscess should have formed a gurgling rale if the cavity contain a liquid, and pectoriloquy with cavernous respiration, and resonance of the voice, if it be empty will be the diagnostic signs.

In some cases the inflammation is situated in the centre of the lung, or at the mediastinum. The physical signs here sometimes fail, or at least a part of them. When therefore all the ordinary symptoms of pneumonia, including the viscid and rusty sputa, and excepting only the acute pain, are observed in any case in which percussion and auscultation fail to yield any signs, we may conclude that the disease occupies the interior of the lung.

Pneumonia is sometimes modified in its symptoms when it occurs in persons greatly debilitated by old age, or other cause. It often happens under these circumstances that there is no acute pain, and little or no expectoration, and the matter caughed up wants the appearance which characterizes that of pneumonia.

The respirations are somewhat quickened, and there is also more or less fever, with dyspnea. though these are all sometimes more or less wanting. The powers of life seem to be prostrated, the features sunken, the mind wandering, and pulse irregular. Auscultation reveals nothing more than mucous sounds; but dullness on percussion is generally distinct enough to be taken, with other symptoms in connection, to form a diagnosis. Occasionally the patient never recovers from the severe nervous shock received through the chill, a low inflammation is produced with but few of the general or special signs of pneumonia. Such cases require to be closely watched, as they are generally very fatal, and may sometimes slip through our fingers (if it may be allowed the expression) at a time when we little expect it.

There is also a variety of pneumonia called lobular, which according to Dr Gerrard is most frequent in children, and its diagnosis is very obscure. Children seldom expectorate

or at least are apt to swallow what is thrown up from the lungs. In very young children we are unable to ascertain whether they have pain and where is its seat; percussion and auscultation is but imperfectly performed, owing to their cries and frequent movements. It is often confounded with previously existing diseases, such as bronchitis, hooping-cough, catarrh, measles; &c &c. According to Condie the symptoms of pneumonia in children, particularly at the commencement of the attack is very obscure and even when more distinctly marked they differ but little from those of bronchitis. it is more common to boys than girls, and is likely to occur in the same child after a shorter or longer period.

Complications: — We have heretofore been speaking of pneumonia, merely as a pure, uncomplicated disease; but its occurrence in this form is I am persuaded much less frequent, than most persons have thought it to be. It is often complicated with, or engrafted upon some other pre-existing disease; as for instance

from bronchitis, from phthisis, from disease of the heart; and from rheumatism of former. In these cases, while the physical signs are the same as in the acute uncomplicated forms of the disease, the general symptoms are often but slightly developed. During the existence of fever of a low form, pneumonia may run through all its stages without our knowledge, unless we investigate the necessary cases for it. And this is what has been spoken of as latent pneumonia. Pneumonia is most frequently complicated with pleurisy, more often perhaps than with any other disease; a knowledge of the relative anatomy of the lungs will suffice to satisfy us of the plausibility of this. We have then pleuro-pneumonia and this needs but a passing notice here as its existence would not influence us in our treatment of the pulmonary inflammation, respect as far as to relieve pain, and to look after and to treat effusions, &c., should they ultimately supervene. There are cases which occasionally come under our notice, in which it is almost impossible for the practitioner to say with absolute

[illegible] the patient has [illegible] or pneumonia till some physical sign be developed whereby a distinction shall be made.

Bilious pneumonia. The name by which this disease has been generally known among us is "bilious pleurisy". The most frequent form of this complication is remittent or intermittent fever, it occurs in autumn, winter, or spring. It is most fatal during those years when bilious fevers are most prevalent and violent in their character. The pneumonia may be either primary or secondary, sometimes it pursues an even mach with the bilious fever. When the complicated disease becomes established, we have not only the symptoms of pneumonia but of bilious fever also or at least a part of them viz.; headache, a yellowish or yellowish-white furred tongue, nausea and vomiting, occasionally yellowness of the skin and conjunctiva, and deep coloured urine. The fever is almost always remittent, with daily paroxysms, which are generally more severe on the alternate days. Sometimes this form of disease assumes a

typhoid character: the pulse becoming feeble, the tongue brown and dry, and the mind wandering.

Pneumonia may be associated with typhoid fever, but that which is most frequently called typhoid pneumonia is characterized by depression, and great prostration. The general symptoms are those of depression, the powers of life seem to have a tendency towards the centre. The pulse, though sometimes full in the beginning, is weak and readily compressible, and sinks rapidly under the use of blood. In the advanced stage the pulse becomes frequent, small and very feeble, the skin is hot and dry, or cold and clammy, and not unfrequently covered with petechiae. The face is sometimes of a dark or dusky hue. The tongue is covered with a brownish fur, and in the latter stage is dry. Sordes collect about the teeth, gums, and even upon the lips occasionally. The evacuations are generally dark and offensive. A tympanitic sound has sometimes been discovered in the chest succeeding dulness, with a absence of respiration

murmur, showing the existence of air in the cavity of the pleura

Diagnosis — pneumonia is sometimes liable to be confounded with the following diseases viz; bronchitis, pulmonary oedema, pleurisy and phthisis. but by reference to the history, and close attention to the physical signs characterizing each disease a diagnosis can almost always be made out. Capillary bronchitis however so nearly simulates certain forms or conditions of pneumonia, that a few brief hints will perhaps be necessary here. It is in cases in which the bronchial inflamation extends to the minute ramifications, that the greatest resemblance is presented to pneumonia. But in the former affection the sensations are more those of soreness than acute pain, and are usually seated in the anterior and upper part of the chest and in the vicinity of the sternum; the expectoration though sometimes streaked with blood, always lacks the extreme viscidity and rusty character of the sputa in pneumonia. No true crepitant rale is heard, but instead of this the dry and mucous rales, there is no bronchial respiration or resonance, and very

seldom a permanent [illegible] of the respiratory murmur in the chest; and finally there is no considerable dullness in percussion. But not unfrequently the two diseases are combined; and when the pneumonia is in the centre of the lung, or disseminated, it is sometimes difficult if not impossible to distinguish between them.

Prognosis In simple uncomplicated cases of pneumonia of one side of the chest, or what is more common of only one or more lobes, occurring in persons of a good constitution we may as a general rule confidently expect a favorable issue.

Pneumonia of the first stage and of great extent is frequently as dangerous, as that of the second stage but more circumscribed, and inflamation of the upper lobes is more serious than inflamation of the same degree and extent of the lower. The danger is also increased when the inflamation attacks the whole of one lung. And in double pneumonia the prognosis is always unfavorable. The supervention of delirium is always an unfavorable and discouraging circumstance. Recovery may take place after a great part of one lung is hepatized; but that it

may still undergo resolution — that the lung may still recover after the third stage or that of gray infiltration has been fully formed, is a stage we have no means of determining, or possibility of proving. The disease appears to be more fatal frequently according as the patient is in the more advanced period of life, say 50 years of age or upwards. In very advanced age it is extremely fatal. In bilious-pneumonia the prognosis depends almost entirely upon the degree of febrile excitement, though this form of the disease often and as may, perhaps, say as a general rule, yields readily to treatment.

Typhoid pneumonia when it appears epidemically is extremely fatal, but otherwise, often yields readily to judicious medical management.

**Causes.** — All causes which tend to produce asphyxia, violent exertions, atmospheric vicissitudes, and exposure particularly when the body is warm and perspiring, diseases of the heart, bronchitis, [illegible] arteries, and foreign bodies. Of the predisposing causes, cold may be ranked among the most efficient. Hence the disease prevails in cold countries, and in colder seasons.

Some persons seem to have a peculiar tendency to the disease, without any known cause. Perhaps the age at which it most frequently appears is from 18 or 20 to 30 or 35. It is more frequent in men than women.

**Treatment**:— In acute pneumonia, seen in the early stages, and occurring in persons of vigorous constitution, bloodletting is our first, our most efficient remedy, in fact our sheet anchor. Of its especial powers in this disease both reason and experience attest. Its good effects are the more marked according as it is the more early employed. In persons of full habit, no disease bears the loss of blood better. In depleting by the lancet, we not only relieve inflammation, but also at the same time diminish the labour of the lungs, thus giving partial rest to the inflamed and diseased organ. The dyspnoea in pneumonia is generally proportionate to the amount of blood sent to the lungs in excess, as is also the risk of effusion of lymph and the obliteration of the cellular tissue of the lungs. And the result of the free abstraction of blood

in this disease, fully vindicates the value of a practice which has been pursued for ages. In deciding upon the quantity of blood to be taken, we must be guided by the stage of the disease, the state of the pulse, and the constitution of the patient. In a vigorous patient, with good pulse, in the early stage, from fourteen to twenty five or even (in some cases) thirty ounces may be taken at once. Should the symptoms not have abated we bleed again in from 12 to 24 hours remembering that the lancet is always to be used pro re nata. We should bleed if possible, in the upright position, from a large orifice, and in a full stream and should continue it till the pulse becomes more soft and compressible; or if contracted, till it becomes fuller, or till syncope appears to be at hand. This vigorous treatment in the early stage will almost always be followed by marked and speedy relief both of dyspnea, and pain. Cases sometimes occur in which notwithstanding the smallness, frequency and feebleness of the pulse, it becomes necessary to bleed the patient speedily. In such cases the function of the lungs, is greatly interrupted

by the sudden and extensive congestion; so much so as to cause a virtual asphyxia, and together with the condition of the pulse, presence of a pallid or purplish colour of the surface. In such cases the surface should be excited by irritants, and particularly the extremities, thus endeavoring to equalize the circulation, while at the same time we unload the engorged lungs, by depletion with the lancet. Under these circumstances the pulse will generally rise while the blood is flowing, thus indicating that the remedy has been rightly and judiciously employed. Whereas the resort to stimulation would not only have been injurious, but possibly fatal in its effects. Should the acute pain which is often present in pneumonia, not be relieved by venesection, after being carried as far as may seem advisable. Cups or leeches may be applied, and blood drawn from the chest to an extent corresponding to the strength of the patient. In the second stage of the disease or that of hepatization, bloodletting should be used with caution. It may sometimes do harm by its improper or untimed use, but often how-

such good results may follow, in its favoring the reabsorption of lymph. It may relieve dyspnea & may tend to prevent the farther extension of the inflammatory process. After venesection has been performed a cathartic of calomel, or calomel & rhubarb, infusion of senna with sulph. magnesia, will in most cases be necessary after which it will be sufficient merely to keep the bowels open by some of the mild cathartics throughout the disease. Some practitioners have been in the habit of depending very much upon the influence of bloodletting in the reduction of pulmonary inflammation & with this view have sometimes carried it to an almost alarming extent. While others pursue an opposite course and bleed very sparingly. Perhaps if we can hit at the medium between the two things we shall not be far out of the way. And again, there are some physicians of the present day who have almost entirely abandoned bloodletting in pneumonia, and who use in its stead, tartarized antimony, asserting that venesection is too powerful an agent — produces too great a depression of the powers of life in many cases of the disease, especially in malarious districts

of country, where pneumonia very frequently puts on a typhoid form, sometimes the first symptoms being those of pure pneumonia, the typhoid condition not presenting itself till some days have elapsed, or not till during the second stage. But under these circumstances bloodletting so weakens the patient, that he is unable in many cases to withstand strength to carry him through this formidable malady. Pescheir, and Broussais observe that "instead of aiding antimony, it acts injurious to its antiphlogistic influence". While Broussais, Bouillaud, Mackintosh, Graves, Stokes, Davis, Watson, and a host of others recommend the use of bloodletting with antimony. Louis after highly recommending antimony, remarks that bloodletting should not be neglected. The great influence which this medicine is capable of exerting in inflammations by its antiphlogist powers, has induced many experimenters to attempt to explain its modus medendi, and various and contradictory have been the conclusions arrived at. Of this numberous Fontanielles. and his views are perhaps the

the most rational and seem to be the most generally received. he came to the conclusion "that the antaphlogistic effects of tartarized antimony depends on alterations of the composition of the blood.

At present this valuable medicine is thought to be almost indispensible as an adjuvant to the lancet. not only in pulmonary inflamations, but in other acute inflamatory diseases. The effect of tartar emetic upon the system depend a good deal upon the quantity given at, and interval between, each dose, It is given in pneumonia in larger or smaller doses, according to the fancy of the practitioner, when exhibited in a full dose so as to produce nasea and vomiting. followed perhaps by purgings, in a majority of cases after the third or fourth dose tolerance is established. in some cases however it does not vomit, or purge. and it is said that in such cases its good effects are more marked and decided. If however the sickness and vomiting go on, it may be checked in a measure by the addition of a few drops of laudanum to each dose, or according to Dr. Williams hydrocyanic acid may

may be used for that purpose, instead of the Laudanum. I have recommended the two tenth of a grain of Tartar emetic to commence with, every one, two, or three hours, according to its effects upon the patient. To be gradually increased to a half grain or grain. Dr. Davis commenced with the third of a grain at intervals of an hour, increasing the dose to two grains every hour.

Another mode of giving antimony has been introduced of late years by Rasori of Pisa. — was subsequently employed by Leuret and others, and is now highly praised by many practitioners both in this Country and Europe. Most of its advocates bleed moderately in the early stage, and use the antimony in cases deemed unsuitable for the Lancet. While others use it almost entirely to the exclusion of the Lancet. It has been given in very large doses, but is now usually prescribed in doses of from half a grain to one and a half grains every hour or two, with the following advantages — when given in the stage of engorgement, the pulse is at once reduced from perhaps 100, or 120 to 75 or 65 beats in the minute, free emesis is set up, thereby not only

emptying the stomach of any irritating or foreign matter that may be present; but making a direct sedative impression upon the system, promptly at the same time as a diaphoretic, and after a little time producing large evacuations from the alimentary canal. The pain and dyspnea that may be present is at once relieved: the bowels after having well purged become regular. The respiration which was before painful and laborious; is now free, full, and easy, and the patient who but a short time ago could not move his body without experiencing the most excruciating pains is now enabled to shift his position, greatly to his comfort and relief. But such good effects are not always experienced. some patients are greatly nauseated and a good deal prostrated by the use of small fractions of a grain of tartar emetic. After using the medicine for some time, say from eight to thirty days, it may be withdrawn or given in diminished doses, provided the inflammation shows no disposition to subside. Otherwise it must be persevered, unless positively contra-indicated.

a patient however who is placed under its use should seldom be long from under the supervision of the practitioner, as serious evils may happen in the intervals of his visits, if long protracted. When the inflamation has reached the second stage tartarized antimony will not be so worthy of confidence, though it may be given even in this stage with marked avantage.

Ipecacuanha will sometimes render us valuable service in pneumonia. especially when given in combination with other remedies.

Opium will be found useful, and in many cases indispensable, it is often a valuable remedy where there is much pain, diarrhea, &c &c. it is frequently given in the form of Dover's Powders, or combined with calomel and ipecac. or Antimony. It is also a valuable ingredient in Expectorant mixtures. It becomes necessary also in most or at least many cases of pneumonia to call in to our aid Murcury, but it is in the second stage of that disease generally, that the remedial powers of Murcury will be most clearly indicated. it should be pushed to gentle tyalism, and for this

purpose may be administered in small and frequently repeated doses; a good plan is to give half a grain or a grain every hour or two - or two grains every two hours &c, - combined with opium and a small portion of ipecac. may sometimes be added if thought necessary. The should should seldom however give more than from ~~than from~~ two to four or five grains of opium in twenty four hours. Should the calomel disagree with, or worry the bowels, Blue mass or hydrargyrum cum creta may be substituted, and if it appears slow in producing its specific effects, the linimentum hydrargiri or strong mercurial ointment may be rubbed in.

Blisters in the second stage of the disease may be applied to the chest with great propriety. and if one is used, it should be large, say from 6 to 8 inches one way, by 8 or 10 the other. Blisters it is believed are often applied much to early, frequently adding to the patients distress, and probably tend to aggravate the existing inflamation, they also interfere with our explorations, which is of no little importance in directing the remedial management of the case. In this stage of the disease

however we must treat symptoms, observing carefully the state of the patients system at large. So long as the pulse continues to be good we may watch patiently the effect of the Mercury. Should the pulse however become feeble, the features sunken, the eyes pallid, the extremities cold and added to this a tendency to delirium, we may be sure that the vital powers are giving way. It becomes necessary in that case to administer stimulants, - Carbonate of Ammonia, wine whey, infusion of Senega or Serpentaria may be tried first, then bark or Quinine with Wine, or brandy in the form of Milk punch. (Ardent spirit must be resorted to in the cases of those accustomed to its use). Oil of Turpentine and Musk has sometimes been given. The diet should be attended to and the patient fed on beef tea or milk - veal broth and jellies &c.

Bilious Pneumonia as a general rule does not bear bloodletting so well as the uncomplicated form of the disease, we may however always take blood by cupping with safety, and with benefit to the patient. The Mercurial plan

should be commenced from the first, after due depletion of the alimentary canal by a purge of calomel, or calomel and rheubarb combined. Quinine should be early resorted to, in doses sufficient to check the paroxysm. ten to eight hundred grains may be given for this purpose during a remission. By arresting the paroxysms we do infinitely more good, in relation to the inflammation than the stimulant action of the Quinine can do harm. There is no stimulant so powerful as the paroxysm itself. The pneumonic symptoms are almost always worse in the paroxysm and decline as that remits. Should the disease approach a typhoid character Quinine becomes still more appropriate.

Typhoid pneumonia does not bear bloodletting so well as the bilious form of the disease. Its indiscriminate use in this disease may be attended with unpleasant and even fatal results. The patient always requires a tonic or stimulant treatment from the first. He should be closely watched and if the powers of life begin to fail, recourse should be had to stimulents, as enumerated above for

later stages of the common form of the disease, Quinine and the refrigerent diaphoretics will be found useful in this form of Pneumonia.

Pneumonia complicated with bronchitis, phthisis, or disease of the heart, is often much benefited by the abstraction of small quantities of blood, but they should be taken from the surface of the chest by cupping glasses, and not from the arm by the lancet. Dr Thomas Watson thought it "often good practice thus to aim at reducing the local mischief with one hand, while with the other we support the patients strength, by means of means of amonia, wine, and nourishing broth." Blisters should also be applied much earlier in this form of the disease, and Mercury should not be forgotten to be used however with caution.

= An =

Inaugural Dissertation

= on =

Hyperid Fever.

Submitted to the examination

= of the =

Board of Regents and Faculty of Physic

= of the =

University of Maryland.

= for the =

Degree of Doctor of Medicine.

= By =

William Martin Lemon,

= of =

= Virginia. =

To the
Learned Professors
of the
University of Maryland.

With the grateful Emotions of my heart, for the Knowledge which I have acquired under their instruction I dedicate this Thesis. ———

W. M. L.

Having a desire to become better acquainted with Enteric disease, I have therefore chosen for the subject of my Inaugural dissertation, One from among that number to which Physicians have seen proper to assign the name Typhoid.

This fever varies greatly as to the mode of its attacks. In some cases it commences abruptly, in others it comes on insidiously, with more or less pain in the back, head, and limbs. Symptoms. The symptoms that are met with in Typhoid Fever, may be very conveniently divided into three stages, those that occur during the 1st. 2nd. and 3rd. weeks of the disease. The symptoms of the 1st. week, generally begin with a rigor, followed by more or less fever, there is also noticed to exist-

considerable disturbance of the nervous system, with feelings of general debility, we have the abdominal derangement, and generally more or less diarrhœa, and in addition to this epistaxis.

Other symptoms are now superadded viz. those that occur during the 2nd. week, the pulse is found to be more frequent, weaker, and more compressible, delirium oftentimes takes the place of the headache, ringing, or buzzing in the ears, occasionally amounting to deafness. The tongue which was previously moist, becomes dry, and tremulus, and dark sordes collect upon the teeth and lips. The abdomen on percussion sounds tympanitic, the characteristic eruption is observed during this week, to make its appearance on the abdomen, consisting,

by minute rose coloured spots,
varying from a line, to two lines
in diameter, slightly prominent,
disappearing upon pressure,
but returning on the pressure
being removed. They can be dis-
tinguished from the bite of the
flea, by their not having the
dark spot in their centre, which
appearance is peculiar to the
flea bite. Sudamina also freq-
uently may be seen. Slight
cough generally exists from the outset
with expectoration, with still a
greater increase of muscular
debility. The patient lies on
his back, with a great tendency
to slide down in the bed. Of the
3rd week, the symptoms vary ac-
cording as the disease is going to
terminate in recovery, or death. If in
the former the symptoms of improvement
with restoration of muscular power,

-And an abatement of all the more formidable Symptoms. If on the other hand it is to end unfavorable, there will be a decided increase in the severity of the symptoms, and frequently becomes more distinct. The pulse will be found to be weaker & more frequent. The most common pulse in Typhoid Fever ranges from 110 to 120. but it sometimes may be as low as 70. Frequently it has been found at 100 during the whole course of the attack. Should it reach at anytime 130 or 140 the attack should be considered as a severe one, since the majority of such patients die. Still it Should be remembered in the latter stages of Typhoid Fever that the pulse is then usual-ly weak & irregular.

The chills are always succeeded by

an increased heat of the surface.
In general the pain in the head is of the dull kind, rather than acute. The mind is wandering, & vacant, with delirium usually proportionate to the violence of the attack. One of the most common characteristics of typhus fever is the loss of muscular power. The tinnitus aurium is often accompanied with deafness, which has been considered by some as a very good sign, but it is only so by comparison, as it thus indicates that the brain is in a less serious condition than if it was perfectly acute.
I neglected to mention in stating some of the prominent symptoms, that of vomiting which is one of frequent occurrence, accompanied usually with pain in the epigastric region.

The appetite is usually bad, if not entirely extinct, until the commencement of convalescence. The sordes that is found collected on the teeth is caused by an altered condition of the salivary glands. The rose coloured spots which are characteristic of this disease usually occur in sudden crops, each of which last from three to five days. The entire eruption disappearing within twelve or fifteen days. Sudamina are generally noticed on the sides of the neck, above the clavicles, and also in the groins. They rarely make their appearance before the twelvth day of the attack. There is a great tendency to sloughing of those parts of the body which are most exposed to pressure, particularly in the more advanced stages, from the patient assuming the same position too long.

and also gangrene may attack
the inflamed surfaces, caused
by the application of blisters,
or Sinapisms. Of Typhoid Fever
there are a vast variety of forms,
each of which varies according
to the presence or absence or prom-
inence of certain symptoms.
Frequently it happens that in some
cases, and often in some epidemics
they are so mild that, from the
beginning to the close, there may
not be present a single severe
symptom. And on the other
hand they may be of such a character
as to baffle the best medical skill.
This Fever has a regular and progres-
sive tendency, seldom if ever do
we have any very sudden change.
Its average duration is from twenty
to thirty days. Death is infrequent
before the seventh day, the most
frequent period for fatal termination

seems to be, somewhere between the fifteenth and twenty-fifth days. Convalescence sometimes commences as early as the first week, but rarely sooner than the close of the second.

The Anatomical Characters.

The lesions detected after death in persons who have died of typhoid fever, are quite numerous and are usually divided into essential & accidental. Among the former are classed those morbid changes that take place in the glands of the small intestines, & mesentery, the ileum is their usual situation. They are some thirty in number, which when in a state of health are slightly elevated, but on examination of this intestine after death from this disease (which is done by making an opening along the course where the mesentery has attached in order to

Save dividing the glands that
we must do notice) These glands,
Or as they are more commonly
the glands of Peyer are found
to have undergone certain morbid
changes, the average number of
them involved will scarcely,
ever be found to exceed more
than two. There are two
of two varieties of them, the hard
& soft. Those of the former may be
distinguished from the latter by,
their being more elevated, harder
to the touch, and on cutting through
the mucous membrane, the sub
-mucous tissue beneath seems to
have been transformed into a
matter of a pale whitish hue,
which is firm and tough. Those
of the latter variety, are less promi-
-nent, softer, with smooth or mam-
-millated surface, and on cutting
into one of this kind, the mucous

Sub-mucous tissues will be found to be moist, injected, and thickened. These go on to ulcerate. They have been found to have undergone the process of ulceration as early as the ninth day. No doubt they undergo this process much earlier, but we cannot be assured of the fact, since fatal terminations seldom take place sooner than this.

The ulceration varies in intensity. Sometimes it only attacks the mucous membrane, and at others, it ceases after having gone through the muscular coat, and then again it proceeds onward through the serous coat, perforating the peritoneum. The perforations rarely exceed more than one in number, and are much more frequent in adults than in children. These glands of Peyer are affected in others than this particular disease, as Phthisis Pulmonalis etc.

The glands of the Mesentery will also be found to be more or less diseased, especially those that are situated opposite the glands affected in the Ileum. The Accidental Changes. They are modifications in the respiratory organs, Morbid changes will often be found in the Pharynx & Oesophagus, also pigmentia in the Mucous membrane of the Stomach. The Liver & Spleen are usually enlarged and softened, the Spleen in particular. It often attains four or five times it natural Size. The Colon is found to contain a large amount of air, whence results the tympanitic condition of the abdomen.
The most usual change discovered from an examination of the blood is a diminution of its Fibrine.
Causes. Very little is known as respects the cause of Typhoid Fever. However, it is known that some Individuals

are much more predisposed to it than others, and as it respects age, the maximum frequency occurs between the age of fifteen and thirty. It also frequently attacks children, rarely persons beyond the age of puberty, and after the age of forty the liability is still further diminished, and at fifty it is very seldom known to occur. Still we have evidence left us to favour the opinion that it may occur occasionally even among persons that have arrived at this age. Persons being crowded together is also a predisposing cause, with insufficient & unwholesome food, bad ventilated apartments, also strangers arriving in large cities are particularly liable to an attack of it. Judging from this one would be led to consider this disease as being propagated by contagion.

True, there will be found quite an accumulation of evidence, going to prove that Typhoid Fever is certainly contagious, and then again, we find that we have equally as large a number who strongly advocated that this disease is not of such a character.

Even our Learned Professors of the Maryland University differ in regard to it, our able Prof. of Surgery has expressed himself as one, who believes it to be contagious beyond a doubt, whilst on the other hand our Learned Prof. of Practice seems to think that if Typhoid Fever be contagious, it certainly is not very active, occuring only under circumstances in which Hygienic means have been grossly neglected.

It may occur at any season of the year, but is most apt to prevail in autumn. As to the recurrence of this disease, it has generally been considered by writers as scarcely

ever to attack the same person the second time, however there are some persons (Louis among the number) who have stated that they have seen well authenticated cases of its second attack, Still it is of such a rare occurrence that a person having been visited by it, he may consider himself as free from at least one of the many ills that human flesh is heir to.

Diagnosis. In forming the diagnosis a person should be very careful, Although there is but one other disease, that it is likely to be confounded with, and that is its kindred affection Typhus, This fact being known it greatly aids one in making out a true diagnosis, which of all things else baffles & perplexes the young Practitioner, the more so, since he well knows that upon its correctness is based in a great measure his failure

be successful in the case that is before him.
This thing of firing into the bush
the too well known will not do.
Since the chances of failure are so
great against him, although this
may be very true, the old one as
well as the young Practitioner will
in the commencement of this disease
find it to be a very difficult mat-
=ter to distinguish whether it is
Typhoid or Typhus that he has to deal
with. A knowledge of this affords
the young Practitioner some con-
=solation (when he happens to
err in making out his diagnosis,
especially in the early stage of the
disease, since he is aware that an
older Brother would be nearly as
liable to err in distinguising the
one from the other as he.)
Still there are certain symptoms that
occur in the course of this disease
with such constancy, and such greater

frequency than the common means that to [illegible] [illegible] occur. in one with those of the other and [illegible] the [illegible] [illegible] in forming a correct & timely diagnosis,
In the first place they differ in their mode of [illegible] [illegible] the [illegible] in Typhoid Fever is usually slow and insidious, whilst in Typhus it is generally more sudden, then again in Typhoid we generally find more or [illegible] diarrhoea, whilst in the third affection the bowels are usually con=stipated, And again the temperature is much higher in the [illegible] in Typhus, Epistaxis & the distended Abdomen notice in this disease occurs but rarely in Typhus,
The eruption is much later in making its appearance in Typhoid than in Typhus, They also differ in duration, The latter terminates favourably or fatally at a-

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much earlier period than the former, They differ very materially as it regards pathological changes. In Typhus we have not the glands of Peyer & Mesenteric glands affected, which are always more or less altered in Typhoid Fever, Prognosis, In Typhoid Fever the prognosis should be given very gardedly, since it is known to vary greatly as it occurs in different seasons, Endemics frequently occurring in a very mild form, And then again it may be very malignant in its nature. The most fatal accident that we meet with in the progress of Typhoid Fever is that of perforation of the intestine This fact should make us the more cautious in giving our prognosis, as this accident happens more frequently in the milder cases, than in those that are less mild. Still when this sad accident does

occur, death should not be considered as inevitable, as frequent recoveries have been known to occur, even after this accident has happened. "Dum spiro spero" should be the motto of every practitioner, no matter how malignant and dire the case may be. One among the most unfavorable symptoms is that of perversion of intelligence, the patient declaring that nothing is the matter with him at the same time expressing a desire to get up, and attend to his accustomed business, when in reality he is labouring under the very gravest symptoms of the disorder. Age should also be looked to in forming our prognosis. The younger the patient with healthy previous [illegible] the stronger is the chance of recovery.

Treatment. Typhoid fever, like several other diseases tends to emacia-

definite course, with a natural tend-
-ency to a happy termination, and
since we possess no means to alter
this course, it would be useless, and
oftentimes dangerous, to do anything,
more than to endeavour to mitigate
the various symptoms as they present
themselves, which will be the better
understood perhaps by dividing
them into four indications for
treatment. The first indication,
is to remove all sources of irrita-
-tion, physical or mental, external
or internal. The second indication
is to moderate excessive excitement.
The third, is to employ stimu-
-lants & tonics whenever debility
calls for the use of them.
The fourth is to counteract local
inflammation wherever found.
To meet the first indication,
the patient should be placed
in a well ventilated apartment

-And in order to remove intestinal irritation a mild purgative should be administered, such as Magnesia or Caster Oil, being ever mindful of the great tendency to diarrhoea that exists in this disorder. Should the stomach be too irritable to effect what may be desired, an enema will answer the purpose indicated. As for emetics they are out of vogue, rarely used except in the very com-mencement of the disease.

To meet the second indication, general & local [illegible], mercury & the antiphlogistic regimen should be brought into requisition. In order to moderate excessive excitement (if not contraindicated) blood should be taken in a mod-erate quantity from the arm - whilst the patient is in an erect or semi-erect position, should any acute inflammation be-

discovered, local bleeding should be employed, But should the debility of such a character as not to permit of topical bloodletting, then internal remedies should be used, and also sinapisms externally, decided benefit is often witnessed (with also at the same time great comfort to the patient) from sponging externally with cold water & vinegar, as also from refrigerant diaphoretics, such as potassae citras, should a more stimulating diaphoretic be demanded Spiritus Nitri dulcis will be found useful. The patient should be allowed cold drinks, lemonade permitted provided there is no diarrhoea. When there is decided local inflammation a mild mercurial course may be very advantageously adopted, a very good preparation to use is that of the pilulae hydrargyri, given in small

-dose and at short intervals.
Should irritability of the stomach
exist the [illegible] Hydrargyri
Chloridum Mite should be adminis-
-tered, Whatever preparation of mer-
-cury is used it should never
be carried so far as to produce
severe ptyalism. If the symptoms
are not noticed to improve, es-
-pecially if the tongue is found
to be dry, and the pulse not
strong. The oleum terebinthinae
will be found to be of great benefit,
However there is a perticular condition
of this organ in which the Oleum
terebinthinae has been administered
with most marked benefit.
Dr. Wood has stated that he has
employed it in the latter stages
of this disease, when the tongue is
undergoing the cleaning process,
if instead of cleaning from the
tip & edges it should part with

-its fur quickly, and in large flakes, generally first from the middle, or back part of the surface, which is left smooth and glossy, as if deprived of its papillae. In this particular state the Oleum Terebinthinae is quite an useful agent.

The third indication is that in which stimulants & tonics are demanded, stimulants should be employed as soon as symptoms of depression are discovered, as also a more nutritious diet, such as beef soup, milk punch, etc. Among the most useful stimulants are wine, whey, brandy & water and ammoniac carbonas. Their effects should be closely observed, and should it be noticed that they are not producing their desired effect, they then should be omitted. The Quiniae sulphas will be found of great service

As a tonic, given in small quantity, and often repeated. The fourth indication that calls for treatment, is that of counteracting any local inflammation wherever found to exist. Should there be inflammation of the brain, attended with [illegible] excitement, bloodletting should be then used. But should the powers of life be too much exhausted, then recourse should be had to counter-irritants. If there be violent cephalagia cups & cold agents should be employed. If obstinate delirium or coma, the head should be then shaved and a blister applied.

In case there is undue nervous irritation with increased sub-sultus, camphor and morphia should be administered, and often a decided benefit will be derived from the careful inhalation of

-Chloroform, In order to relieve the Singultus which often is a source of great annoyance, musk, Creasote & Chloroform will be found useful. Hemorrhage from the bowels is arrested by the use of plumbi acetas or by some one of the vegitable astringents, such as Kino or Khatany, often times combined with Opium which seems to enhance their virtue, provided it be not contra-indicated by the presence of central Symptoms. Epistaxis if excessive, and the other ordinary means of arresting it having failed, the nostrils should then be plugged both anteriorly & posteriorly. When peritonitis is aroused from intestinal perforation, the most effec-tual remedy is that of Opium given in large doses.

Should the tympanitis at any time

become colder than natural, hot bricks or bottles of hot water should be applied to them, with blisters and sinapisms to the abdomen. In case bedsores occur from the patient occupying the same position, the double mattrass or pillows should be so arranged as to save the part from future pressure, and as a local remedy brandy or the lead ointment will be found to be of benefit. It is very important that the condition of the bladder be ascertained from time to time, and the catheter should be used if necessity demands it. In order to be sure that the bladder is not distended, the hypogastric region should be felt with the hand or percussed, as well as that of the cæcum at every visit. During convalescence great care and vigilance are required.

the condition of the patient should be [illegible]. The diet should be regulated with extreme caution, relapses being not unfrequently produced by some indiscretion in diet. Exposures of every kind should be especially avoided.

A number of specific methods of treatment of typhoid fever [illegible] proposed. But in a disorder like this where so many have recovered spontaneously, one should not be too hasty in attributing to any exclusive method of treatment, the merit of effecting cures. Nature alone has effected more cures in this disorder, than she is given credit for. In the treatment of this affection "he must be reckoned the safest and best practitioner," says the judicious Dr. Watson, "who knows when to abstain from acting, as well as to act; who has learned when and to what extent the case may be left to the salutary processes of nature."

An

Inaugural Dissertation

on

The Proximate Cause, Essential Nature and Products of Inflammation

Submitted to the Examination of the Provost, Regents, and Faculty of Physic of the University of Maryland

For the Degree of Doctor of Medicine

By

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# Inflammation

There is no pathological State of deeper interest, or more real importance to the Medical Man than that of inflammation. Being the first process in that molecular Change which foreshadows the disorganization of Animal bodies, and their resolution into the Oregenal Constituents of which they were formed, it must, of Course, involve, as a prior Consequence a total destruction of the vital Power, and Certain extinction of Organic life.

And as it is the duty, and Should be the Chief, if not the Only aim of the Physician, to Mitigate the Suffering of mankind, and Prolong human life; Do any Condition which threaten the One, or endanger the Other, offer inducements for profound Study, and thorough investigation.

Various and prolonged researches have

been made with regard to inflammation, and numerous definitions given it, but although the former have greatly increased our knowledge, yet the most unexceptionable of the latter are but unsuccessful attempts of what we are not able satisfactorily to do. Guided however, by the observations of those indomitable Spirits, and lofty intellects, whose labours have achieved so much for Medical Science in the last, and during the present Century, we arrive at Conclusions at once interesting and highly instructive.

Following then in the light of their observation, we find certain very frequent Changes taking place which will be briefly noticed.

It has been established that for the healthy nutrition of any part, four Conditions are necessary; viz: 1st a regular supply of blood within a proper distance; 2d the Normal state and

Composition of the blood; 3d a certain influence of the Nervous force; and 4th a healthy Condition of the part to be nourished. Now in Inflammation we have perverted Nutrition, and as a consequent, alteration or deficiency in one or all of these Conditions.

II. There is more than the ordinary quantity of blood flowing into a part in a given time. The Vessels become exceedingly dilated, and tortuous, and presents a pouched or aneurismal appearance.

It has been thought by some distinguished Pathologists, that in Inflammation new bloodvessels are formed by the extravasated Corpuscles arranging and forcing for themselves a passage through the Cellular tissue to some neighboring Capillary. This however is at present denied, and it is generally Conceded that no new Vessels are formed in the early

period of inflammation, that such only happen later in the process, when lymph has been poured out, and organized.

The apparently greater vascularity of an inflamed part is attributable to the fact, that from dilatation of the vessels, many of the smaller tubes, before incapable of conveying red blood, now become distended with it, and consequently brought into view, and many that were before very minute now appear of considerable size. This increase is not confined to one set of vessels, but Arteries, Capillaries and Veins are all proportionably enlarged; nor is it confined to any particular part or organ, but is common to all, even the non-vascular tissues which when inflamed, depending for their nutrition on the vessels of adjacent parts Cause such vessels to undergo the same changes.

It is from this enlargement of the blood-vessels that the redness and swelling so

Constant in inflammation to a considerable extent depend. But the redness does not arise entirely from this Cause, but also from a larger number of red Corpuscles than usual, which seem to crowd together, adhesing in groups and filling up the vessels at the expense of the liquid Constituents of the blood. A still further Cause of the redness and Swelling is the extravasation of blood through the walls of the vessels into the interstices of the surrounding tissues, which very generally takes place in fully developed inflammation.

Again, alteration in the quantity of blood to a part is produced by a change in its velocity. Not only do the vessels become enlarged as we have seen, but the blood moves through them much more slowly than in health, and finally ceases to flow almost entirely.

The cause of the retarded Movement of the blood, has been the subject of inquiry, but still remains, to a considerable extent, an unsettled point. The most satisfactory explanation that has been given, and the one which seems attended with the least difficulty is that which refers it, in part at least, to a disturbance of the relation or affinity existing between the Circulating fluid and the walls of the Vessels, and the surrounding parts. The alteration in Calibre of the vessels may also contribute to this result.

IIII. The second Condition necessary for healthy nutrition is the normal state and Composition of the blood. That the adaptation is seriously disturbed during inflammation is very Certain; but wherein it Consists, and what the change is precisely seems rather difficult to determine.

An excess in fibrine is generally thought to Constitute the most important Change, But Mr Paget raises the objection to this, that the increase in fibrine is ambiguous, inasmuch as the White Corpuscles are known to be increased in many inflammations, and not being able to Separate these two Constituents, it is impossible to say in a given Case how much of the supposed increase of fibrine is due to increase of the White Corpuscles. We find in Pregnancy and in other Conditions not inflammatory the blood presenting the Buffy Coat, and if this Condition depends on an excess of fibrine, it becomes evident, that though this State of the blood may happen in inflammation, it also occurs under other Circumstances.

IIIII. The third Condition enumerated as necessary for the healthy Nutrition of a part, is a proper influence of the

nervous force — That this influence of the nerve force is perverted in inflammation admits not of a doubt, but of the nature of the change which it undergoes we have little knowledge, inasmuch as we do not know how the nerves act in fulfilling their office in healthy nutrition.

The intense sensitiveness of an inflamed part is familiar to all, and is generally referred to nervous excitability. In this condition the weakest stimulus is acutely felt, and even natural, or but slightly increased heat seems intense burning. We have also frequently long continued pain where there is besides, no evidence of inflammation; and in many instances we find the pain out of all relation to the other symptoms, making it evident, that there is some other disturbance of the nervous force besides that which we recognize as pain in the inflamed part, and that this dis-

turbance affects intimately the process of Nutrition.

Again, it is not an unfrequent occurrence to have pain referred from the seat of disease in one part, to some other organ or portion of body, and after remaining a time, to light up, apparently, inflammation in its new seat. And further, irritation applied to one part in the healthy Condition, often produces inflammation in another part, as inflammation of the Conjunctiva from over exertion of the optic nerve, showing Conclusively, that the disease has its Cause in the perversion of nervous influence necessary for its healthy Nutrition.

IV. For the proper maintenance of a part by nutrition, we must have the part in the natural, healthy state, and this Condition like all the others, may be altered in inflammation. The simplest demonstration of this is found in Common injuries

particularly those of non vascular parts, as the Vitreous humour Cornea &c, where effects following the injury cannot be referred to the Circulation. In these Cases we have morbid processes set up, in many respects similar to inflammation in other parts, which must have their primary Cause in a Change from the normal Condition of the part which is the Seat of injury.

Thus have been noticed briefly the four Conditions necessary and essential to healthy nutrition, and we find that they are all more or less altered in inflammation. There is no doubt that it may have its inception in a deviation from any one of these Conditions, but when fully developed, they are all to a Considerable extent involved, and Constitute its proximate Cause.

Of the nature of inflammation two distinctly opposite Opinions are held;

one set of Pathologists regarding it as increased vital action, while another considers it as diminished action, or a state of debility. The term "increased action" is often used as synonymous with inflammation, and so far as refers to increased vital activity of the vessels, with strict propriety. It cannot be reasonably doubted that the enlargement of bloodvessels in the early part of the inflammatory process, is an active dilatation, produced by their own increased vital power, when the oscillatory and retrograde movement of the blood, so constantly observed, is taken into consideration. For if, as contended by the advocates of diminished action, the enlargement depends alone upon the increased quantity of blood pressing against the walls of the vessels and thus distending them, this vibratory, and retrograde

Motion is entirely inexplicable. But although with regard to the circulation there is increased activity, yet in other respects we find diminished power. This is most apparent in the nutrition of an inflamed part, the tissues of which, from being feebly nourished, possess but a low degree of vitality, and is consequently prone to decay, and finally to disintegration or more rapid death.

We will now enumerate the principal constituents of the inflammatory process; they are increased quantity of blood in the vessels with retarded movement of the blood, pain or exalted morbid sensation, increased heat and swelling. In inflammation they are generally all present, but it might not be improper frequently to call a process by that name, though one or other of them might be absent. We have already no-

lacid the increased quantity and retarded Movement of the blood, and have seen that it, together, with increase of the red Corpuscles, and the extravasation of blood into the Cellular tissue, Constitutes the redness of Inflammation.

Allusion has likewise been made to the increased nervous excitement of inflamed parts, amounting to a Morbid Sensibility. This, doubtless, Constitutes in some degree the Second Stage Characteristic of inflammation; but it is very evident that tension of the tissues from increased quantity of blood and other fluids present is the Chief Source of Pain. This is proved from the fact that the Pain is always most intense in the unyielding tissues such as Cartilages, ligaments and tendons although they have but a meagre Supply of Nerves of Common Sensibility and scarcely feel at all in health,

while in the elastic and yielding tissues as the lungs, liver and Spleen, though abundantly supplied with nervous filaments, the pain is much less acute and felt generally as a dull, aching sensation.

Of the preternatural heat of inflammation, little is necessary to be said. It is produced partly by the increased quantity of blood flowing into the part, but principally no doubt by the rapid oxidation of the tissues. This appears to be the most reasonable view, from the fact, that we have much more rapid oxidation going on in inflammation than in health and this union of Oxygen with the Hydrogen & Carbon of the tissues being the acknowledged Cause of animal heat, it follows, as a natural Consequence, that when this takes place rapidly we must

have increased heat.

The swelling in the first stage of inflammation depends upon the distension of the bloodvessels; but this can never produce any great amount, and later it depends almost entirely upon the fluids poured out into the interstices of the affected part. The most important of these is Coagulable lymph; but we have Serum also, and frequently blood; and when the Mucous Membranes are the tissues involved, Mucus is poured out in great abundance. These are termed the products of inflammation, and they will be briefly noticed as Constituting an essential part of the process.

The first of these, "Coagulable lymph," or "inflammatory exudation" as it is now frequently called, generally passes through the bloodvessels principally the Capillaries as a pellucid liquid, possess-

ing the characteristic of spontaneously organizing itself into living structure. There are two varieties of the exudation, the fibrinous and the corpuscular. The fibrinous variety after being effused, speedily coagulates, forming a solid substance, similar to the fibrinous clot which forms in the blood after it has been extracted. This is the variety generally found in inflammations of the serous membranes, as the pleura & pericardium, where it appears coagulated in distinct laminae, or in solid elastic patches on different parts of the inflamed surface.

In the corpuscular exudation no coagulation takes place, but the corpuscles form, and float free in the liquid part. They appear very much like the original chyle corpuscles, the white corpuscles of the blood, and those of granulations, and are seen in herpetic eruptions and in vaccinia

and in many parenchymatous inflammations, but not very often in those of serous membranes, unless connected with a vitiated condition of the system. These Corpuscles may be formed into organic cells, and their degeneration is probably the origin of pus Corpuscles. Hence this variety of exudation is characteristic of "Suppurative inflammation", while the fibrinous, being more organizable, constitutes what is termed the "adhesive" form.

Pure Serum is very seldom found out in inflammatory diseases of a Sthenic Character. That which is generally called Serum, being the liquor Sanguinis, holding fibrine in solution. In some low grades of inflammation, however, we do have Serum effused which evinces no disposition to Coagulate and when absorbed leaves no trace of a solid product behind. This might happen even though

the effused fluid did contain fibrine, as it might be known to be absorbed while still in solution, but further evidence has been obtained by experiments upon the effusion of certain low inflammations, as Hydrocephalus. Chemists of the Conjunctiva &c. in which no fibrine could be found, and which could not be made to Coagulate.

Blood is a very common product in most severe inflammations; and indeed a knowledge of the condition of the vessels in an inflamed part would lead us to expect it. For we find them engorged and greatly distended, and that with the more solid parts of the blood which of course makes ruptures of their walls, the more delicate ones particularly, only a natural accident. In Pneumonia we have a good example of this effusion of blood as a product of inflammation, in the rusty coloured sputa. So constantly ephectorated in the early stage of

that disease. But blood occurs oftener as a secondary than as a primary result of inflammation, in recently organized lymph from rupture of the newly formed vessels. This is no doubt the case in the change of Hydrocele into Hematocele. Here lymph has been poured out and partially organized, and the vessels recently formed, have been ruptured discharging their blood into the sack of the Tunica Vaginalis, which at first contained only serum & lymph. In many cases of inflammation of a low grade, the effusion is stained with blood. This is not however to be attributed to hemorrhage but to solution of the colouring matter of the blood transuding through the walls of the vessels.

The last product of inflammation enumerated is mucus. It occurs of course from mucous surfaces and is poured out in great abundance as the first effect of any irritation of those surfaces. It is a

mucous, ropy, pellucid liquor, possessing no Corpuscles or organized Material. There is Contained in it generally epithelial Cells which have been thrown off by the Mucous Membrane during its Secretion. It is often, (probably only when the Submucous tissue is involved,) Mixed with Corpuscular lymph and is inhorant as found frequently Containing Pus Cells and granulations, showing an organizable tendency. These are doubtlessly formed from the degeneration of lymph Corpuscles, which, as before Stated are most likely the product of inflamed Submucous tissue.

Thus has been noticed in a desultory manner some points of interest Connected with the inflammatory process. We have seen that it has its Proximate Cause in a perversion of the Nutritive function, that it is in relation to the Circulation in-

Increased vital action, but in some other respects, especially that of nutrition it is diminished action that is four Principal Constituents are, increased fulness of the blood vessels with retarded Movement of the blood, Pain, or acute Morbid Sensibility, increased and Preternatural heat & Swelling, that these are all generally present, but at times one or other of them might be absent; and finally, briefly referred to its ordinary Products; Coagulable lymph, Serum, blood and mucus.

Inaugural Dissertation

on

The Blood.

Respectfully submitted to
the Board of Regents and
Faculty of Physic
of the
University of Maryland,

For the degree
of
Doctor of Medicine

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# The Blood.

In preparing an essay of this kind it cannot be expected that all that is known concerning the subject discussed can have been learned by one who has devoted only a few years to the study of a science so wide in its range, much less can it be expected that he should have made actual experiments to prove what is said, or have advanced anything new.

I am free therefore to confess that whatever I have learned on this subject, has been from books and from the efforts you have so earnestly and so faithfully made to instruct, and that whatever want of correctness or of knowledge on the subject may be manifest, results from inattention or inability on my part to comprehend what you have thus endeavored to teach.

If the many wonderful and beautiful arrangements in the human body, none per-

hand is more replete with interest than the blood. The admirers of the works of nature cannot find a more interesting subject than this. Nor are its beauties seen by the mere casual observer, but only by him who will listen to the still small voice which it is constantly uttering to the attentive ear.

§ 1. It may not be amiss to examine first its vessels. These are divided into three distinct sets, viz: the arteries, the veins and the capillaries. The arteries are cylindrical tubes, branching from one single vessel, continuous with the ventricle of the heart, and similar in structure, called Aorta. These by their divisions and subdivisions serve to convey the blood to every part of the body. They are three in structure and consist of three coats. The external is firm and strong and serves at the same time as the chief means of resistance of the vessel, and of connection with surrounding parts. The middle

coat is that upon which the thickness of the artery depends, and is so brittle as to be cut through by the thread in the ligature of a vessel. The internal coat is a thin serous membrane which lines the interior of the artery, and gives it the smooth polish which the surface presents. As they proceed from the aorta they are given off at nearly right angles but as they divide among themselves they divide at more acute angles. Another fact worthy of remark is their frequent anastomoses, so that if the circulation through one of them should be interrupted, it is carried on through the others. They possess elasticity contractility, tonicity and irritability all of which exert an important influence in the passage of the blood through them. They gradually diminish in size and terminate in what are called capillaries. It is a matter of small importance to determine where they [illegible] commenced.

They are the connecting link between the arteries and veins, and through them the important functions of nutrition, secretion, absorption, calorification and excretion; in fact all the changes which take place between the blood and the surrounding tissues and organs. They constitute a network which is distributed through every part of the body through every tissue, every membrane however delicate, and are so numerous that the point of a fine needle cannot penetrate the skin without wounding several of these minute vessels. They are remarkable for their uniform diameter and constant divisions and communications. The coats of the arteries are not continuous through them. Their walls consist of a delicate membrane in which an appearance of transverse striation can sometimes be observed. The opinion that there are vessels adapted to supply the white tissues, carrying from the arteries the liquor sanguinis, and leaving the corpuscles behind

through inability to receive them, seems to be erroneous; for in all cases the nutrient materials conveyed by the blood are absorbed by the cells or other elementary parts of the tissues immediately from the vessels, and are imparted by them to others which are further removed.

The veins consist of the same structure as the arteries, but are thinner, so that when emptied of their contents they collapse.

In number they are larger than the arteries and like them their combined area would constitute a cone whose apex would be at the heart and base at the surface of the body, consequently the blood in returning to the heart is passing from a larger to a smaller channel, and therefore increases in rapidity as it approaches that organ.

§ 2. The process of sanguification is carried on through the alimentary canal, the lacteals, lymphatics, mesenteric and various other glands in the system. The nutrient

material after having been prepared for reception into the blood making organ undergoes from the circulation by a set of vessels called lacteals. These consist of a set of prolongations of the internal membrane lining the alimentary canal, having a cylindrical form, called the villi, which are copiously supplied with blood-vessels from the adjacent surface. There can be no reasonable doubt but these villi with their capillaries are the chief instruments of absorption. In each villus is the beginning of another set of vessels called lacteals. These originate in a plexus of branches formed by anastomosis, and not in blind orifices as was formerly supposed. These in their turn absorb the contents of each villus. The material absorbed by these two sets of vessels undergo important changes before they are received into the circulation, and converted into blood. During the passage of the chyle

through the lacteals, mesenteric glands and thoracic duct, the presence of fibrin becomes manifest, and the albumen and oily matters seem to diminish. The substances absorbed by the capillaries is conveyed to the liver through the mesenteric veins, where they undergo a depurating, assimilating and vitalising action, before entering the general circulation.

The lymphatic glands perform an important office in sanguification also. These are distributed through every part of the body and take up the lymph oozed through the tissues. Their origin cannot be clearly traced, but they seem to form a plexus in the substance of the tissues from which their trunks emerge and after passing, like the lacteals, through a series of glands where the lymph is subjected to their action, empty their contents into the veins, partly through the thoracic duct and partly through the lymphatic duct on the opposite side, and thence

distributed to every part of the body. From the circumstance it seems reasonable to believe that the lymph is a nutritious and not an excrementitious substance as was formerly supposed. There is also reason to suppose that the lymphatics not only absorb the fluid portion of the blood which is effused through the capillaries, but that they also absorb the decomposed matter of the tissues. It is thus seen that these absorbents perform a most important part in sanguification. It may not be amiss to notice particularly the changes which take place in the different assimilating organs.

The liver removes from the blood the hydro-carbonaceous principle which cannot be removed directly by respiration and converts them into glyco-colic and taurocolic acid which, after ministering to the function of digestion are oxydized and again assimilated and carried off through the lungs in the form of carbonic acid

and water, the alkaline bases and sulphur being carried off through the kidneys. This organ also [illegible] in preparing materials for the combustive process. It converts all the saccharine matter derived from the food into liver-sugar, which is most favorable to oxydation. It converts the fatty matter into liver-fat which is destined to furnish nutriment for the adipose and nervous tissues; whatever superabundance there may be, being carried off by the combustive process. It also aids in assimilating the histogenetic materials; the albumen being converted into a form more suitable for transmission through the system, fibrin also being generated at its expense.

Fibrin seems to be formed more abundantly however during the passage of the chyle through the mesenteric glands, and the resemblance of the fluid to blood then begins to appear also. Here too the colourless corpuscles seem to be [illegible].

The ductless glands seem is be necessary
to the completion of sanguification, but
their function is less understood than those
of the others as from the difficulty
of experimenting with the blood of these
organs

§3. The quantity of blood must of course vary with the size and temperament of the individual, the proximate amount however seems to be about 16 or 18 lbs.

§4. The bright scarlet color of the arterial, and the purple of the venous blood, its homogeneousness, slight viscidity, with a consistence and density greater than water and a faint odor seem to be is distinguishing physical properties. Its chemical reaction is alkaline, and vital important purposes are served by this property. This alkalinity furnishes a base for the acids generated within the system. Thus the alkaline carbonates are formed, which are so essential within the blood to its healthy condition. The carbonate and bicarbonate of soda

have a special power of rendering the albumen soluble, and also of altogether preventing or impeding the coagulation of fibrin, apparently through their power of chemically dissolving it. Thus the blood is kept in a fluid state. And the alkali likewise has the power of dissolving the oxide of Iron and other metalic oxids, so as to form perfectly transparent solutions. The free alkali serves also to promote the combustion of organic compounds such as milk- and grape-sugar, by their union with oxygen, and to promote the metamorphosis of various vegetable acids introduced into the system with articles of food.

When examined with a microscope immediately when drawn from the system, its apparent homogeniety is not real. It is found to consist of two very apparently distinct components the liquor sanguinis, and a set of corpuscles suspended in it, the great mass of the latter consisting of red ones, upon which the color of the blood depends; the

latter being colorless. The liquor sanguinis consists of albumen, fibrin and salts all being held in solution. On being allowed to stand a time, the fibrin and corpuscles unite to form the 'crassamentum' while albumen and salts with the water form the 'serum'. The red corpuscles are cells of a discoidal form and may be very much altered by various reagents on account of the permeability of their walls by different fluids. The principle part of the substance of these is formed by the two compounds, globulin and hæmatine, the latter of which is held in solution in the cells.

From all that has been gathered it seems probable that the red corpuscles are especially concerned in preparing pabulum for the nervous and muscular tissues while the white serve to prepare a pabulum for the fibrous. These doubtless have a definite term of life and while some are undergoing disintegration, others are in a state of advancing development, to supply their places. The pabulum

of these must of course be formed from the nutritious matters ingested, but exactly how they are developed remains as yet one of the mysteries of physiology.

The ultimate elements of the blood must, from the very nature of the case, be very difficult to determine, as the conditions upon which they depend are subject to such a variety of changes; but from a variety of analyses made under different circumstances, they have been approximately ascertained, and are represented in the following table. Out of 1000 parts of blood about 795.45 consist of water,

| | | |
|---|---|---|
| 2.02 | " | fibrin, |
| 149.48 | " | Corpuscles, |
| 39.42 | " | albumen, |
| 2.01 | " | fatty matters, |
| 3.27 | " | extractive ", |
| 8.33 | " | mineral constituents; |

These may vary somewhat in consequence of age, sex, temperament, employment and diet of the individual. The variations

in disease are numerous and afford many important indications in the treatment of various maladies. The consideration of this subject belongs to the pathologist and perhaps no subject affords more interest to him than this, and none perhaps has received more attention, and justly too, for as it is acknowledged that there are many diseases resulting directly from blood poisons, what is more rational than that their nature should be a subject of study?

Should any irregularity occur in the assimilating organs or the excretions be in any way deranged, the effect on the blood must be obvious. Again as each tissue is nourished by its own peculiar pabulum, any failure in such nourishment would leave in the blood that which might be considered as foreign matter, and if not eliminated by the excretory organs might [illegible] disease. Diseased matters may also be introduced in various

wards from without, - through the alimentary canal, the respiratory organs or the external surface.

There are only two constituents which can be considered as being endowed with vital properties, the fibrin and corpuscles, which exhibit this property in coagulation.

The relations which albumen bears to the living body are of the most important and fundamental character, since it at the expense of this that most of the other constituents are formed. The fatty matters are evidently intended to supply the adipose and nervous vesicles, and nutrition for cells generally. The heat of the body is also in a measure maintained by means of combustion by the fatty matters. All the other organic compounds of the blood are to be looked upon not as in any way subservient to those constructive changes in which nutrition properly consists, but as the progress of metamorphoses, either of the alimentary ma-

materials or of the tissues themselves, and as on their way to be eliminated. The uses of all the inorganic compounds are as yet by no means positively determined; but that they are intended to enter into the composition of the different tissues, and to preserve a normal condition of the blood seems extremely probable, since their presence is essential to the healthy condition of the tissues, especially of the solid ones.

It thus appears that the precise composition of the blood at any one time is dependent on a great variety of antecedent circumstances, and can scarcely be the same at any two periods; and yet we find that taken as a whole it exhibits such a remarkable constancy in its leading characteristics, that we can scarcely fail to recognise in it some such capacity for self-development and maintenance as that which the solid tissues are admitted to have. These are beau-

[illegible] shown in the spontaneous recovery of its normal condition after the most serious perversions in the erythemata and other diseases of blood poison. As it is the medium of so many important functions in health it is no less an important agent in the treatment of disease, as it is through this that most of the remedial measures must act. The operation of remedial substances, for the most part, depends upon the power which they possess when introduced into the circulating current of effecting some determinate change chemically, and thereby the vital condition either of the components of the blood, or of some of the tissues which it nourishes; and their determination to some special part or organ must be attributed to the same kind of elective affinity, as that by which the normal constituents of the blood are determined in nutrition. The performance of the vari-

§5. ous offices of the blood depends of course upon its being conveyed to the various parts of the

body [illegible] the consideration of the circulation. Of all the operations going on in the body none perhaps is more interesting and beautiful than this. The heart may be considered as the principle organ in driving the blood through its vessels, but it is by no means the only force which is brought to bear in this movement. It is like a constant monitor, performing unceasing duty and is always ready to sound the alarm when danger is near. It possesses the properties contractility and irritability in an eminent degree, the latter in a great measure independent of any connection with the surrounding parts. The blood seems to be its natural stimulus, though its action may be modified by substances introduced from without the system. The nervous system also may be so modified as that its influence may be felt directly upon its action under [illegible] or violent emotion. The number of contractions of the heart is about 70 or 75 per

minute and [illegible] the amount of blood in the system at 18 lbs. and the left ventricle to contain about 3 ℥ at each contraction, the whole amount would thus be propelled through the system once in every one and a third of a minute. The force thus exerted in a single day would be great, but when the force for many years is estimated it is almost beyond comprehension. It becomes more apparent when we consider the extent through which the blood must pass and the resistance to be overcome.

The arteries, by their elasticity and contractility, exert a most important influence over the circulation. By the former the interrupted force of the heart is made equable and [illegible] constant, and by the latter, the flow is kept up through [illegible] more remote from the heart. The pulsation of the arteries, which involves an augmentation of capacity, seems to be caused by their elongation and not by any increase of [illegible]

ometre as might at first appear, but by their elongation, by which they are lifted from their bed at each pulsation. This distension does not take place all over the body at the same moment, but is propagated as a wave. The passage of this wave and the propulsion of the fluid seem to be the same.

The movement of the blood through the [illegible] attracted much [illegible] especially [illegible] important functions are carried on in them, and as it is so intimately connected with the phenomena of inflamation. The influence of the heart is undoubtedly felt upon them, but that the current is dependent on other influences is also evident as is seen in the various functions going on in them, and it is rendered more rapid in any increase of their activity, and retarded by their depression or cessation. At any rate there [illegible] between the blood and its vessels, and the

the blood but being unnatural increases the hindrance to its passage. The physical principle that if two liquids communicate with one another in a capillary tube, or in a porous or parenchymatous structure, and have for that tube or structure different chemical affinities, movement will ensue, and the liquid having the greatest energetic affinity will move with the greatest [illegible] liquid before it, seems quite adequate to explain some of the phenomena taking place in the capillary system of the [illegible] it is ready to part, and being prepared to receive the carbonic acid set free in the tissues, must obviously have greater affinity for these tissues than it has in the lungs, in which both these changes have already been effected. The opposite affinities prevail in the pulmonary tissues, but upon the same

physical principle the venous blood is driven forward in the systemic system, and [illegible] in the pulmonary. In the systemic however there are vital forces brought to bear, which exert an important force; each distinct tissue and organ, attracting to itself the peculiar substances which it requires as the materials of its own nutrition.

The veins possess the same properties as the arteries but not to the same extent. The movement of the blood through these is without doubt effected by the vis à tergo, which results from the heart, arteries and capillaries. There are some concurrent causes however, which [illegible] some force on the venous circulation. The inspiratory movement is supposed to draw the blood of the veins into the chest in order to supply the vacuum created there at the moment of the decent of the diaphragm. On the other hand the expiratory movement while it directly causes accumulation in the veins will assist the heart in propel-

ing the blood into the arteries. The frequent [illegible] of the muscles upon [illegible] trunks is another powerful a- [illegible] in promoting [illegible] circulation. Position also has an important influence on the movement of the blood through its vessels. [illegible] exerted much greater influence upon the circulation than one would at first thought suppose, but certainly [illegible] that [illegible] fluid in a bent tube to become at rest on a level, is not [illegible] in the blood vessels. The circulation is also influenced to a great degree by causes brought to bear through the nervous system. These seem to affect the heart and cappillaries more directly than the other vessels. As before stated the heart may be brought into violent action or its action altogether suspended by any sudden and violent emotion, or more indirectly by their action [illegible] cappillaries either increasing or diminishing their diameter, thus promoting or retarding the

circulation through them. An example of the latter is seen in the more moderate [illegible] such as are caused at the thought of appearing before the [illegible] in the "Green room" or of being advised "for the good of community" to spend another Winter with them. This state of things may cause a greater flow of blood than usual to the heart [illegible] it action, or it may so depress its action [illegible] that the organs may not be properly nourished [illegible] stimulated to action. In the former case there may result general [illegible] excitement which induces that state of feverishness and anxiety about commencement times which so generally prevails. Now any derangement of this kind is likely to disorder [illegible] itself [illegible] of all others should at that time be most composed. [illegible] the [illegible] deficiency on such occasions?

An
Inaugural Dissertation
on
Dysentery
Submitted for examination
to the
Provost Regents & Faculty of Physic
of the
University of Maryland
For the
Degree of Doctor of Medicine
by
Richard John Scott
of
Maryland

Gentlemen

You are all taught by experience the degree of anxiety that naturally infest the mind of ebry medical student upon the rapid approach of our final examination. The issue of which not only our happiness but future prosperity depends. It being required by your honorable body that we should previous to such examination present to your examinations an essay upon some one disease or subject connected with the study of medicine. And from my frequent opportunities during the past summer of observing many cases of dysentery. That the subject which I have selected. As few are the questions in medicine involving a more grave and serious consideration than the subject and treatment of dysentery. when we consider as it is at times

capable of assuming an endemic sporadic or epidemic form. The many carried off by its ravages. But in selecting dysentery it is to say little more than have already been said upon the subject. And not with the vain hopes of adding one page of glory to the already glorious subject. Dysentery consist in inflammation of the mucous membrane of the large intestines. Its two forms acute and chronic symptoms causes predisposing and exciting diagnosis prognosis complications pathological lesions and treatment.

Acute dysentery being characterised by small mucous or bloody evacuations griping pains in the abdomen straining at the stool tenesmus and fever. which sometimes precede the local symptoms but most frequently succeeds their manifestation

the pulse being hard and frequent
skin hot and dry the face flushed
the tongue furred the patient complai
ning of headache and thirst.
But in this as in other abdominal
diseases the pulse soon becomes small
and weak the strength rapidly decli
nes and the temperature of the
body sinks. The pain is often
severe occupying the hypogastric or
some part of the tract of the
colon, where there is generally more
or less tenderness upon pressure.
Sometimes the irritation of the bowels
is reflected upon the bladder and
dysuria occurs and at other times the
stomach sympathizes and nausea
and vomiting ensues. With all
this local suffering there is a
continuance of febrile distress the
patient passes sleepless or dreamy
and disturbed nights and is low
spirited and desponding

By causes a predisposition to dysentery is produced by the continued influence of heat augmenting the excitability of the alimentary mucous membrane elating the surface of the body rendering them more susceptible to the influence of cold, one of the most common exciting causes of the disease. when combined with moisture, hence the frequency of dysentery among persons exposed to the cold and dampness of night after having been previously heated during the day.
By which cause the hepatic and perspiratory secretions are checked and congestion of the portal circle and consequently of the bowels results. Substances direct ly irritant in their action upon the mucous membrane of the bowels are among the exciting causes as unripe

fruits Substances difficult of
Solution in the Stomach unwhole
Some and indigestible food of
all Kinds.

The question has ben much
agitated whether dysentery be a
contagious disease, to this the profes
sion has most universally agreed
it is not in the ordinary form.
There is little doubt Says Some of
our authors to where opinion I am
inclined to fixed in certain combi
ned situations, where many dysen
teric patients are crowded without
due attention to cleanliness and
Ventilation the disease appears
to be communicated to persons
who are exposed owing probably
to the influence of putrid exhala
tions. which are acknowledged to
be capable of producing dysente
ry

The Diagnosis being obvious the disease with which it is most frequently confounded being diarrhoea they both may be accompanied with griping pains in the abdomen followed by frequent liquid evacuations. But in diarrhoea they are fecal. in dysentery there is a retention of fecal matter, or they are expelled from time to time in small hard seperate lumps, termed Scybalæ. Again straining and tenesmus and the excretion of mucous, which is often tinged with blood, form no necessary features in diarrhoea, whereas ~~in~~ dysentery they are prominent and constant. These nosological distinctions are true and usefull, although in our actual intercourse with the Sick we dont find them always observed. As some of the worst forms of dysentery commence with the ordinary Symtoms of diarrhoea. The latter being attended with little or no fever.

In almost all cases of dysentery the hepatic secretion is diminished but occasionally disorder of the liver and stomach attends the disease. Being the result of causes either identical or coexistent with those of the intestinal affection. Characterised by a feeling of oppression in the epigastric region sense of fullness in the right hypochrondrium vomiting yellowness of the tongue skin urine and conjunctiva, and a greater degree of fever. an entire absence a morbid increase or a depraved condition of the biliary secretion. It is this complication that adds to the violence and danger of dysentery occuring in tropical climates. This is known as bilious dysentery. Another the adynamic occuring in persons exposed to the various depressing causes as in Ships Camps. Combined with other causes which

prostrate the vital powers. and vitiate the blood. which gives rise in addition to the symptoms of dysentery. those of a typhoid character such as frequent feeble and irregular pulse brown and dry tongue with sordes about the teeth. a dusky skin marked sometimes with petechia great prostration of the strength. and finally evidences of nervous disorder. As great anxiety. headache delirium subsultus tendinum and stupor.

Dysentery not unfrequently occurs in miasmatic districts either in conjunction with intermittent or remittent fevers or as a distinct disease modified in its character by the prevailing atmospheric influences. which is to be distinguished by its paroxysmal tendency the fever and dysenteric symptoms being increased. every or every other day at the same time. assuming a

tertian or quotidian type. The pain and tenesmus recurring with increased severity the patients calls to the stool being more frequent and urgent these symptoms lasting for four or six hours. which undergo an intermission or temporal remission to return again with the same severity and at the same time, according as it be of the tertian or quotidian type,

Prognosis must be guarded the danger being in proportion to the extent of the colon involved in the inflammation. If tendency be discoverable upon passing along the whole tract of the colon indicating a similar extent of inflammation, the prognosis is unfavourable. The sudden cessation of pain and tenesmus the occurrence of tympanites coldness of the extremities frequent feeble and irregular

pulse delerium hiccough subsu
ctus tendinum stupor portend a
fatal termination. In cases where
the stomach and liver are much
disorded the prognosis is also less
favourable. But in cases of sim
ple uncomplicated dysentery occur
ring in a good constitution. when
seen and treated early the progno
sis is generally favourable.

Pathological Lesions

After death from ordinary dysen
tery the mucous membrane of
the colon and rectum evinces
signs of inflammation which
is thickened redened and
occasionally gangrenous and
sloughing. more frequently in
protracted cases deep and exten
sive ulcerations in the course
of the transverse bands of
the colon. or enlargement
and ulceration of the follicles

of the large intestine. In the more
violent forms of this disease espe
cially those which occur in intr
tropical climates in addition to
the inflammation ulceration mortif
ication or sloughing of the inner
coat of the large intestine, there is
often a morbid vascularity of the
mesocolon mesentery and omen
tum with adhesions of the one
to the adjacent viscera
and of the contiguous portions
of the intestines to each other
especially the latter when the
ulcerations have perforated nearly
all the coats of the bowels. The glands
of the mesentery are often enlar
ged sometimes inflamed and soften
ed more rarely in a state of
suppuration, the corresponding
portion of the intestine being
usually the seat of a deep
and extensive [illegible] ulcer.

Chronic Dysentery is seldom an original disease, when occurring being the consequence of an acute attack, which is occasionally associated with chronic enteritis which is not always easy to determine the amount in which the two coats of the bowels are involved in the inflammation. Nor is the decision of the matter of much practical importance, as the treatment of the two diseases are essentially the same at least in those cases where the symptoms are commingled. Chronic dysentery when not thus combined are distinguished by the frequency and comparatible smallness of the evacuations their character and the tenesmus that attends them. The most of the stools being of a pale watery colour & consisting of mucous united with a pus

like secretion is with blood. Some times fecal and biliary matters are mixed with the proper dysenteric discharges. which in some cases acquiring more or less of a fetid odour. With which there is generally more or less tenesmus. and tenderness upon pressure over and along the tract of the colon. The pulse skin and appetite are affected as in enteritis. The symptoms of general derangement being upon the whole less. In this disease the constitution often sympathizes but little. The disease lasting for weeks even months without making any serious inroades upon the general health, But if a unfavourable change is not effected by treatment the patient gradually emaciates the countenance becomes pale sallow and sunken the abdomen becomes flattened and contracted.

the pulse feeble irregular and accelerated towards evening. The strength declines the case being closed with colliquative fever occasionally symptoms is a troublesome symptom. The prognosis is generally unfavourable. The lesions detected after death from chronic dysentery are more or less thickening and ulceration of the mucous membrane of the colon and rectum. which sometimes they are in a state of gelatinization making it probable that patients may recover after ulceration have taken place.

Treatment of acute dysentery

A great variety of remedies have been employed in the treatment of this disease. which must vary with the degree of violence existing in the disease, and the diversities arising from its associated affections

In the early stages of the disease if the pulse be full and vigorous skin hot and dry tenesmus and tormina great general blood letting should be employed. and if the symptoms by which it was first denounced continue unabated it should be again resorted to. Although being held as required as it ordinary occurs. As an auxiliary to general bloodletting or in cases where that agent is inadmissible if there be local pain and tenderness cups or leeches should be employed over the part where they exist. Of the internal remedies cathartics as one of the most prominent indications being to free the mucous membrane of its irritating secretions and remove the congestion of the portal circulation both being best answered by this class of remedies. one of the most efficient being

castor oil given in doses of half an ounce either in combination or alternating with laudanum or opium about 20 or 30 drops repeated at proper intervals until a change in the secretions are effected. or until fecal evacuations are procured. Or the oleaginous mixture may be used, consisting of

| | |
|---|---|
| Olei Ricini | ℥i |
| Aromatic Syrup of Rhei | ℥i |
| Gum acacia | ℥ii |
| camphor water | ℥ii |
| Tinctur Opii | gtt 40 |

Of which a table spoonfull may be given every second hour, with an opiate at night to ensure rest and repose to the patient. which is best administered in the form of Doses powders which in addition to the quieting effects of the opium we get the diaphoretic influence of the Ipecac. besides its alterant effects,

If the disease should not yield to this mode of treatment alternative doses of mercury with diaphoretics and opiates, as Calomel one grain Ipecac half grain with a fourth of a grain of opium. repeated every hour or two. Or two or three grains of blue mass with the same quantity of Ipecac and opium. repeated at the same intervals. Continued until slight ptyalism is produced if the disease does not yield before. If the discharges contain much blood after proper depletion and evacuation of the bowels Acetate of Lead may be employed. But where the discharges consist entirely of blood the acetate from its sedative action may be used only in the disease. but with this exception its uses are confined to the later stages of the disease, which doses powders should be given at night as before to relieve restlessness and quiet the patient in doses from five to ten grains according to circumstances

When the disease commences with symptoms of diarrhea the combination of calomel Ipecac and opium will generally cut the disease short. When the symptoms of febrile excitement run high the saline cathartics have been recommended for their depleting effects by carrying away the watery particles of the blood. After all symptoms of febrile and inflammation have been removed and a proper change in the secretions have been effected, and there remains nothing but diarrhea purging. Astringents then find their field of applicability. Of these both the vegetable and mineral may be used. The most important of which are the Acetate of Lead Catechu Kino Tannin and Sulphate of Copper. Of the local remedies in addition to leeches or cupsham fomentations cataplasms should be employed as they bring great relief to the local distress rendered sometimes

15

more anodyne by the addition of Tinct
ure of Opii or Camphor. Opiate enema may
be given to relieve pain and tenesmus
when violent after the violence of the
disease have been reduced. Withall this
the antiphlogistic regimen should be carefully observed throughout the disease.
The utmost caution should be observed
both in regard to quality and amount
of the patient diet both during the
existence and convalescence from this
disease. whilst the disease continues the
mildest diluents only should be allowed
and these in a moderate quantity at a
time. After convalescence have fully
commenced the patient should be
restricted to a bland and most
nourishing diet and this in a
moderate quantity. As errors in diet
are among the most frequent causes
of a tardy recovery & and frequent
relapses

The bilious family of this disease requires the most energetic employment of mercury. Dysentery when associated with remittent or intermittent fevers The same course of treatment should be pursued so far as regards the bowel affection. But measures must be taken to prevent the return of the paroxysm and counteract the malarious influence on the System. For the accomplishment of this quinine is our most reliable remedy. Therefore whenever an intermission or remission has been obtained with only so much action during the interval as kept up by the local disease after thorough evacuation of the bowels and other depletion that may be necessary. Then quinine may be safely employed. And it being especially indicated when during an epidemic of dysentery the fever assumes a typhoid character.

The typhoid variety of this disease gene
ral bleeding and active purgation is
not generally admissible. When the
disease presents this condition from its com
mencement the bowels should be cleared of
their irritating contents, and where there is
a no great degree of depression, leeches a cups
should be used to counteract local inflamma
tion. The remedial plan that must bene
fit is to be expected from, is the mercuria
l impression, which is to be effected by its
combination with opium and Ipecac.
Hemorrhage from the bowels should
be restrained by Acetate of lead in combinat
ion with opium. In many cases it will
be necessary to stimulate the patient
Ammonia wine brandy quinine may be used
for this purpose. Stimulating embrocations
over the abdomen have been found use
full in this form of the disease

Treatment of chronic dysentery
Regulation of the diet being one very
important point in the treatment of

This form of dysentery. General bleeding but seldom required but leeches or cups should be employed when local pain and tenderness exist. the daily use of the warm bath and fomentations or cataplasms should be employed over the abdomen which generally brings great relief to the local distress. It is in this stage of the disease that blistering becomes a usefull part of the treatment of dysentery. Of the internal remedies mercury in combination with opium and Ipecac carried to slight ptyalism if the symptoms should not yield before. After fever and inflammation subside astringents become usefull. as it is in this and the subsequent stages of this disease that they find their largest field of applicability. Those which have been found most successfull are the Acetate of Lead Nitrate of Silver Sulphate Copper Kino catechu Tannin Hopes mixture have been very much lauded for its usefullness in the

treatment of this form of the disease composed of

Nitric Acid ℥i
Tincture Opii 20 gtt
Camphor water ℥ii
dose a desert spoon full

especially indicated if the secretions become alkaline. when the disease is confined to the lower part of the bowels. Injections of the Acetate lead and nitrate of silver have been recommended. The latter, I have in two instances seen it afford great relief to the suspension of the frequency of the stools and relief of tenesmus In this as in the acute stage opium should be employed to quiet and ensure repose to the patient. best given at night in the form of dovers powder which it may be given from 5 to 10 grains according to circumstances. Balsam of Copabia and Terpentine have been

used in this form of the disease with advantage. During the continuance of this disease the patient should be restricted to a mild unirritating diet and that in a moderate quantity at a time, and some bland mucilaginous fluid for drink as toast or rice water. And should also be shielded from the influence of cold and damp and all sudden atmospheric changes by flanel next his skin and a carefull attention to the temperature of his chamber. In this stage of the disease when the patient is troubled with frequent greety or albuminoid discharges Strychnia has been found a usefull remedy, given in doses from one twelfth to one sixteenth of a grain

February 18th 1855-

R. Scott Jr

An

Inaugural Dissertation

On

Fractures of the Cranium

Submitted to the examination

of the

Provost Regents and Faculty

of

Physic

of the

University of Maryland

for the degree

of

Doctor of Medicine

John W. Aldridge

(Gentlemen)

Being forcibly impressed of the absolute necessity of the Practitioner being able to treat such intricate cases as fractures of the cranium with inflammation supervening, and of the manifold miseries and sufferings of my fellow-beings resulting from mal-treatment of the same, induces me to present this subject as a Thesis in its proper form to the faculty of the University of Maryland, and forgetting my interest from my kind preceptor Dr. Smith to whom as the accomplished gentleman and accredited American surgeon, I owe my

thankes for opening to me the light of truth and knowledge upon the important subject of my discussion,— We will see presently if we pause and examine more minutely how admirably well adapted is the construction of the scull to resist the many injuries it is thrown into contact with, as an illustration of the same we have only to look at the beautiful mechanism of Parturition where the Longitudinal diameter of the childes head being sometimes greater than the Antero-Posterior of the pelvis gradually relaxes its walls in its descent so as to facilitate the expulsion of the vertex without any serious results taken place to the structure of the nervous system or organs of sense within, From the manner in

which the different bones of the cranium are arranged as a spherical box is constructed after the manner of arches which makes it in the majority of cases capable of receiveing blowes of intense violence without any serious results, yet this does not always follow as a general rule. In Children owing to the elasticity of its osseous matter it can be forcibly compressed without dangerous results supervencing. Wounds of the head are the most dangerous difficult and important in the art of Surgery. though at the same time presents the most beautiful field for study. then what a rich recompense must it be to him who having a thorough knowledge of its healing art. sets out upon the stormy path of life. imbued as it were with the high knowledge and greatness of

the office intrusted to his care. and with that simple but beautiful instrument the Trephine. shewing light into darkness. like some good angel diffusing a halo of glory around him. Let us now confine our remarks to the organ that has been the subject of this thesis. The cranium is divided into eight different bones the occipital two parietal. Frontal. two temporal Sphenoid and Ethmoid. with its different sinuses and fossae for the lodgement of nervous matter within. Fractures of the scull may be divided into those which consist of simple fissures. Fractured with depression either simple or compound. Fractures of the petrosal. and Fractures of the internal together with punctured fractures constitute the principle. Simple fracture may be readily ascertained

together with depression by the following means. The scalp being carefully shaved the Surgeon will upon a close examination of the injured parts find a depression with a corresponding ridge or elevation. he must here be careful in forming his diagnosis. Sometimes and not unfrequently the sinuses of the dura mater being wounded blood becomes extravasated under the tissues of the scalp forming a coagulum conveying the impression of a sharp or serrated structure of bone. this may be however easily known by its quick yielding under the influence of firm pressure with the finger. but although there may be a real condition of fracture with depression. yet notwithstanding this condition of things there still may be no compression for the reason of the external walls being more

rely driven into the cancellated structure of the diploe. this condition, being principally confined to patients of a middle age as the diploe neither exists in infancy nor in the aged, should symtoms of extravisation - insue. in my umble opinion we should make use of incisions. to which some surgeons most strenuously contend against. under the impression that it must necessarily aggravate the condition of the wound. which it cannot do more so in my opinion than allowing some spiculae of bone to remain pressing upon the membranes within. but they contend that the patient should be bled purged and kept under strict antiphlogistic measures this treatment I should prefer after the trephine had been called into action. in order to combat with the

local inflammation ensuing, Bleeding [illegible] the [illegible] [illegible] and [illegible] [illegible]

of frequent occurrence. owing to rupture of some of its membranes. (sh: Seuil)

The surgeon upon seeing a case of Simple fracture. if he be doubtful with regard to its nature should amediately trephine subsequently place his patient upon the anti phlogistic treatment, repeated blood letting, purgatives. and cold applicati ons. also removeing any splinters of bone that are depressed: constitute the principle treatment, With regard to fractures with depression accompanied with extravasation; This kind is frequent with children but is not of so much importance, but with the adult how far different is the case the depressed being entirely obliterated the external table is completely driven in upon the Dura Mater, resulting

in rupture of its membranes and extravasation; the curious case I had in the head. the opportunity of seeing in the office of my preceptor Dr. J. D. Smith. the patients name is William Kearney. some six months ago this man being engaged as a hod carrier was standing under the building that he was employed in erecting when unexpectedly a small load of brick fell from above upon his head prostrating him to the ground in a insensible condition. Medical assistance was promptly on the spot. but it never occured to the practitioners mind of the case. as being one of depression although the patient was insensible for nearly a week. he was however bled and treated for the symptoms of concussion which had the happy effect of restoring the poor man to his consci

ence. when I first saw him it had been some seven months since the accident had taken place. the poor creature even at that late period was suffering most intensely from symptoms of compression. fancying that he heard the noisey chorus of so many ducks. and so deaf that even the loudest noise in the iron foundry made not the slightest impression upon his hearing, this state of things lasted for some weeks after he came under treatment. the degree is I am convinced being caused by the rupture of the Membrana Tympani or pressure upon the Auditory nerve from inflammation within, his gait was that of one who had evidently been imbibeing to freely. the probe was introduced with the object of finding some spiculae of bone. but without success. they no doubt having penetrated

some part of the Dura Mater or Arachnoid from the amount of fluid constantly effused evidently discharged through the petrous portion of the bone and then outwards by the membrane of which rupture I spoke as having as I thought caused his deafness, Lint was gently pushed in the wound with the object of dilating it and setting up inflammation in order to facilitate the expulsion of any splintered bones, but without success owing probably to its having been a case of such long standing. The poor man now remains in as much of a deplorable condition as ever, a sad evidence of the too late neglect of the Surgeon in using the Trephine.

Compound Fractures. These Fractures are of considerable danger owing to the probability of the inflammation spreading over the surface of the brain and its

membranes, which should never be punctured without great consideration. when the blood becomes extravasated under the membranes and it is seen bulging up from pressure within, it should under these circumstances become warrantable. but not unless, and then the more dreadful symptoms may take place of Hernia Cerebri or Fungus cerebri as it is sometimes designated, and at last from the constant irritation set up death comes relief to the suffering patient. A case I saw some time ago illustrates what I have already remarked. A man was firing off a gun. when by some accident or other the breech pin flew out and struck him on the forehead. fracturing and driving in the bone just above the external angular process, the small portions of spiculae together with the bone

being removed by Dr. R. R. Smith Jr.
and the depressed condition of the bones
elevated. some few hours after inflamme
ation taken place. there came from the scu
ll about two tablespoonfuls of brain fol
lowed much to my surprise by no seri
ous consequences not even the slightest im
pairment of his facultys. yet notwithstan
ding all this nature gradually accom
modated herself to the loss of substance
within. Fractures from gun shot, are
generally of the compound kind. accomp
anied with great depression. these
kind of fractures are sometimes attend
ed with great amount of
embarrassment to the Surgeon, the
ball from the momentum with
which it is expelled carries with it sometimes
the fractured portions jamming
them under the sound parts. fre
quently it becomes driven into the cancellated

[illegible] of the [illegible] in its position for life without any dangerous results. The great danger to be apprehended in wounds of this character is inflammation of the brain and its membranes or meningitis as it is sometimes designated. With regard to the treatment of this kind of inflammation I should strictly forbid the use of Tartar Emetic as its arterial sedative effects can be easily substituted by repeated blood letting and purgatives, it having the tendency to send a greater amount of blood to the brain from the violent retchings caused by its nauseous property upon some nervous systems, Cold applications should the inflammation run high and the bones much comminuted are of great service, the head being at first well shaved, and if Hernia Cerebri takes place we must have resource

a compression with a little oil laid upon its surface. if this however fail. it must then be shaved off and treated with the application of lime water and oil as before. Fractures of the internal are of rare occurence and symptoms of inflammation set in at night. Fractures of the external are of more frequent occurrence and are the result sometimes of the most trivial accidents, the danger to be apprehended is abscess of the Dura Mater resulting in necrosis, under the circumstances the trephine must be resorted to to relieve compression. and the treatment antiphlogistic. To this some practitioners object. as tending to bleeding and purgatives. and elevating the bone in time to its proper level. if I was called in upon a case of this kind. I should immediately trephine for fear of serious results taken place to the membranes

followed by abscess. and also to allow the escape of extravasated fluid. but in very young children the bone may probably accommodate itself to the pressure without resorting to these severe measures. Punctured Fractures. } These fractures are sometimes attended with grate solution of continuity, as for instance from some blunt pointed instrument, which generally speaking are fatal owing to the fractured portions becoming lodged between the Dura Mater and scull where they as foreign bodyes, setting up a great amount of inflammation, matter - formes around these spiculae of bone which in the course of a little while must necessarily die.. and like all sequestrum require to be removed, with as little irritation as possible, It now becomes the [illegible] the surgeon to lay before the patient in the most gentle manner he possibly can the

dangerous [illegible] that must necessarily ensue unless he [illegible] submits to the operation. as all antiphlogistic means [illegible] will be in vain unless the splinter or foreign substance be removed. after the trephining has been performed. the former remedys I spoke of are to be resorted too. In the operation we are assisted in a great measure by the finger and the probe. for removing the fractured portions. Fissure or Fracture of the base of the cranium is invariably attended with the most disastrous results to the patient, displacement or separation of

the Ethmoid bone very often takes place followed by rupture of the Dura Mater with extravasation. this is very often occasioned by for instance the body falling from a height. alights on the cranium and the body from the weight and momen

tum with which it is inflicted drives the
basilar process completely in, [illegible] this
is attended with a great amount of effusion
of blood both internally and externally.
all of which symptoms are of a grave
character and cannot but help ending
fatally. Bleeding from the nose and
mouth when the patient is in a
insensible condition is a sure sign of
fracture of the base, the prognosis is doubtful,
we must be on our guard against
symptoms of inflammation and meet
them as they arise. This constitutes
the principle but I may say hopeless
treatment. Having now fully discussed
the principle cases of fracture. let us
now pass a few remarks with rega
rd to trephining. Trephining consists of
the following acts. first of all that of
laying bare the bone. next perforating
it thirdly and lastly elevating it.

in [illegible] necessity every part of the skull may be trephined: although we carefully avoid the different sinuses as much as possible. In fractures with depression it is seldom necessary to raise an intire circle. all that we desire is to make a opening large enough upon its corresponding ridge for raiseing the depressed portion. The instrument for this operation consists of the following. The Elevator circular saw bone. knife and a brush. for cleansing the saws teeth. all these instruments every Surgeon is expected to have in his posession. When a musket ball strikes the cranium it generally makes a hole no larger than itself. with or without any radiating fracture. with a good bone trephine you may be able sometimes to embrace the whole seat of fracture and thus remove all the depression. If the-

bone is very much comminuted employ a small strip of leather with a hole in it for the trephine to operate. in order to act as a fulcrum for the elevator. some Surgeons prefer one of iron. but I am of a opinion that it is not yielding enough to the instrument and may only make matters worse. In the following operation these rules must be observed, after having made your incision through the scalp by a cross cut. you must next desect the flaps backwards. having now arrived at the pericranium. it must be gently scraped from the bone. the centre pin being steadily fixed in the bone. the Surgeon must now commence his rotation from right to left quickly until a groove has been sawn sufficiently large enough to guide it. when it must then be withdrawn and its teeth cleansed. this operation is

to be frequently repeated. until the trephine reaches the diploe when it must then moderate its action and so on until it reaches the internal table, which will be known by the peculiar crackling noise it gives forth. Should the bleeding become profuse it should be rather promoted than restrained. unless it proceed from the meningeal artery. when it must then be compressed. any extravasation must be removed by sopping it up with a sponge. the depth must occasionly be assertained by the probe, should the extravasation be found under the Dura Mater it must then be divided the treatment after this operation is as simple as possible. a little lint smeared with some mild ointment is to be laid between the edges of the wound this may be retained in its position by a compress but I should much prefer laying the

flaps over the hole. and bringing them
in to apposition with sticking plaster,
after the ulceration the head should be
then bandaged. bleeding, purgatives. and
cold applications must follow. to lessen
inflammation. The Dura Mater if
no ugly symptoms come on generally
sloughs, pus and throws out granulations
which gradually rise in the vacuum form-
ing a tough scar.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

ling least mercurial [illegible]

[illegible]

combined with small doses of the

Extract Hyoscyami and Pulvis Ipe-

cacuanha may be substituted [illegible]

[illegible]

The evacuations must be watched

[illegible]

by the diet and drinks of the

patient. All food should be [illegible]

-diluted, and all fresh vegetables,

[illegible]

[illegible]

of the Stomach.

[illegible]

[illegible]

[illegible]

[illegible]

An
Inaugural Dissertation
on
Intermittent Fever
Submitted to the examination
of the Provost Regents
and Faculty of Physic
of the
University of Maryland
For the Degree of
Doctor in Medicine
By
Hez. Linthicum
Howard County
Maryland

An
Inaugural Dissertation
on
Intermittent Fever.
Submitted to the examination
of the [illegible] and
Faculty of Physic of the
University of Maryland
for the degree of
Doctor in Medicine,
[illegible]
[illegible]

[illegible] is characterized by [illegible]
recurring at stated times
[illegible] of fever between
[illegible]
[illegible] one paroxysm [illegible]
[illegible] the next is called
[illegible] apyrexia, the time
period occupied by one paroxysm and
the succeeding intermission is called the

77

41

44

[illegible]

[illegible] of digestive debilitus, and constipation.

[illegible] the first [illegible] he should [illegible]

[illegible] avoid animal food or otherwise

[illegible] the lighter kinds such as milk [illegible]

[illegible] eggs and boiled meals in connexion

with farinaceous substances, and

[illegible] digested vegetables. Stimulating

drinks should not be used. He should

[illegible] avoid eating a full meal within

[illegible] three hours of the expected paroxysm.

[illegible] aromatic [illegible] should be avoided from

[illegible] first of July to the commencement of [illegible]

[illegible] the Autumn [illegible]

[illegible] evening [illegible] should be avoided

[illegible] of other times it

[illegible] needed [illegible] with the stomach [illegible]

[illegible]

intense heat of the sun in the middle

[illegible] day should be guarded against

[illegible] the kinds of [illegible] should be [illegible] 46

"Note."—

According to Messrs Millingen & Green the sulphate of Cinchonia given in larger doses, acts as promptly and beneficially towards the cure of Intermittent fever as does the sulphate of Quinia. The first author further affirms that both the Quinine and Cinchonine may be administered without injury and with much benefit at the very onset of the disease as an abortive given in large doses.

On

Inaugural Dissertation.

on

Dysentery.

Submitted to the

Examination

of the Provost,

Regents and the Faculty of

Medicine

Of the University of Maryland

For the degree of Doctor in

Medicine

By

Spencer Daniel

of Hertford County

N. Carolina.

The word Sympathy is derived from the Greek, signifies to bear or suffer together. This however strictly speaking, is not its Philosophical meaning: Sympathetic affections being, in every instance posterior in point of time, and arising as a consequence of some primary affection. When we take a survey of the Animal Creation our attention is naturally most strongly attracted to the examination of our information, and Philosophy afterwards increases even the interest arising from self love, by discovering to us the superiority of man over the inferior Animals; not only in the general system of his Organization, but by the Powers and capabilities of his bodily powers. This perfectibility of Man may be attributed or at least best traced, to the slowness of, and length of time employed in his growth. In all animals his progress to maturity is most imperceptible, and his strength and qualities develope themselves most gradually. The extreme sensibility which he preserves in

his fibres during so long in infancy and youth is the mean by which Nature accomplishing the final per:fection of his organization, while at the same time, it renders him more than any other animal liable to those various habits & modifications, which in so extraordinary a manner diversify his moral & physical history, & open so singular & interesting a field of speculation to the Philosopher & the Physician. Let us survey the human machine in all its connexions, from the simple textures which form its component parts, to those subtile & ethereal principles which actuate & move it, and we must be astoni:shed that an organization so admirable, and combinations and effects causing and influencing the manner of his existence, should have been so long ~~was~~ neglected by a Being capable of reflection & reason, and that the true exercise of observation and inductive Philosophy, should be of such recent date. The subject is at once noble & interesting - to trace Man from the first moment of his existence to its last scene, - and to contemplate the work of Nature, the most varied, complicated and perfect, - for those very reasons the most obscure, subtile and

frail. Those hidden chains of Sympathy, which are frequently exhibited in the progress of disease, may justly be held one of the most important branches of Medical Enquiry; and a knowledge of these Relations and Sympathies arising from the nature of our organization or dependent on disease is indispensable to the Physician. By them he is frequently led to discover the primary malady, and it is only then he is enabled to employ his remedies with that precision and promptitude which under Nature, insure success. It is this which chiefly distinguishes the practice of the true Physician from the desperate and hazardous plans of the Empiric, who madly seeks to force and control Nature — an attempt as [illegible] as that of the Persian Monarch who ordered the Ocean to be scourged and chained. For an explanation of these Phenomena, we must direct our attention to the Brain, the seat and source of sensation and intelligence — to its appendages the spinal marrow, and to the expansion of the Nervous tissue which pervades and vivifies the whole body. How totally dependent the human system is on these requires no proof; nor is it necessary to dwell on the (rea

and economy of Nature in this profusion & distribution. The necessity, of their healthful and unimpeded Condition to life and the enjoyment of its powers, must be the object of continual observation, and the dreadful consequences of their injury, or interruption of their functions, familiar to all those who have given their attention to the profession of Medicine. The most of the viscera in the abdomen & thorax, on whose functions the health & energy of the System materially depend, appear to be obedient to other laws, and although they have connection with the Cerebral Nerves, through the medium of the par vagum, yet their powers do not seem subservient to the caprice of the will. The action of these organs is constant and unremitted beginning with the dawn of life and ceasing only when the vital spark is extinct. The subject however we have chosen is manifestly connected with the Nervous System; and although our knowledge of the nature and principles of its operation be as yet vague and unsatisfactory, it does not seem rash, even in the

present state of science to settle the power of Sympa-thy in that system and more particularly in that portion of it called the Great Sympathetic. This Nerve is admirably calculated for the purpose. It arises from the Sixth and the Vidian Branch of the Fifth Pair, and traced in its course we find it swelling out into Ganglia (forming (according to Bichat little subordinate Brains, receiving Constan-t accessions, and not diminishing in size, as is the case with all other nerves. In this circumstance it resembles the spinal Marrow, this being larger in the Lumbar than in the Cervical region. By what peculiar principle this System performs its part in the human frame, we are, and may perhaps remain forever ignorant; but reasoning from analogy & the phenomena, we are led to believe that the existence of a fluid in the nerves, destined for the support and circulation through the whole Body, of this vital power, is exposed to few material objections. That nerves exist in the texture of Bones and Cartilages, has not been, I believe, demonstrated; yet by

induction it is fairly supposed. The circumstance that compression of a Nerve will destroy its agency favours ~~the~~ the theory of a circulating Fluid and a Physiologist in France has affirmed the fact of his having, by means of very minute instruments, succeeded in injecting them. Indeed it would seem liable to no opposition on this point, for a fluid might pass in the nerves as well as in the extreme Vessels or in the minute tubes of animalcules. If we take a view of the whole fabric of Man we find every Organ exquisitely adapted to the performance of its own peculiar function. The Heart contracts from the presence of the blood, and by this contraction it is distributed to the minutest parts of the Arterial System: the Lungs have the property of imparting oxygen to the blood, an office essential to life; and so with all the other organs — performing their respective functions, as the Stomach, liver, Pancreas, Kidneys &c. It is to their perfect action & their due equilibrium that health, or the natural perfection of the human frame, is owing. If, by a parity of

reasoning, we allow the same regularity of function to the Nervous system, & think we shall have no difficulty in explaining certain classes of those Sympathies to which the body is subject. In the 1st place, sympathetic affections may be induced from a defect of nervous stimuli, For as it is a universal Law in the Animal Economy, that when any part has more to perform than its natural function, we uniformly find a preternatural determination & influx of Fluids to that organ, as if Nature, alarmed at the most distant approach of danger, instituted this process to repell the attack: Conformable to this, we find, in the Nervous system, that disease is frequently accompanied by an exquisite degree of sensibility arising from an excess of the Nervous principle, while at the same time, we are irresistably drawn to the conclusion that a derangement of a neighbouring organ must be the result of a defect of its accustomed & natural supply of Nervous stimuli. It is the opinion of some writers of eminence,

That all inflammatory affections depend on a primary disease of the solids, and that those of irritation proceed from a diseased state of the fluids: the latter class occasioned by the abstraction of a portion of that nervous energy required in perfect health, and appearing somewhat analogous to a Sympathetic affection. The Disease called Dyspeptic Phthisis belongs to this last division, and seems induced in this manner: The Stomach may become affected in various ways, as by acrid ingesta introduced, which produces inflamation of its coats, and of course more than a due proportion of the Nervous power is exhausted; thereby inducing secondary or sympathetic affection of the Lungs. It might be objected that inflammatory action frequently accompanies the sympathetic affection. I believe, however, it seldom assumes this diathesis in any great degree, until after the primary affection, on which it depended, has in some measure subsided, or its irritability is destroyed. The disease called Scurvy may in this same manner be addu-

-ced in support of the same principle. Produced as we know it to be, by salt and acrid ingesta acting on the Coats of the Stomach, - The vessels of the Skin lose their power: hemorrhages of a peculiar nature ensue, and the whole mass of fluids appear to be totally vitiated. When the Uterus assumes that peculiar action immediately attendant on conception, the whole System becomes affected, - the Stomach is frequently attacked with Dyspepsia, Nausea & Vomiting are sometimes incited, and the bowels become constipated. All show that the whole energies of Nature are intent on the great process going on - which perpetuates the Species. The great flow or retention of the Menstrual Discharge, is frequently a Sympathetic affection arising from a disordered state of the Abdominal Viscera - more frequently from derangement of the Stomach and Intestines; and hence the propriety of administering Purgatives previous to the exhibition of those remedies which have a specific action on the Uterus. Vascular affections appear to be a kind of consequence arising from some

primitive Serous affection, as well as most other movements of the Body, whether salutary or morbid. Most of the Sympathies seem to have their origine in the Mucous Membrane from whence they emanate like so many radii of a circle. The Skin and the lungs are evidently closely connected: a fact strongly illustrated in those Latitudes which are subject to quick transitions of Temperature, especially, when accompanied with dampness; giving rise to various forms of Pulmonary affections: while in the happy, Latitudes of Madeira and Lisbon, these diseases are of very rare occurrence. Every Physician who has attended to complaints of the Lungs accompanied with fever, must have observed that when the skin is hard and dry, the Dispnoea and restlessness are increased in the same proportion. Similar effects take place in Asthmatic complaints, and hence the propriety of administering those remedies which have a direct tendency to the skin. This may be farther exemplified by plunging a person in

Cold water: here the Cutaneous Vessels contract and propel the Blood into the internal Organs, thereby producing, that Fullness or Swelling which universally takes place, Reaction however, in this Case, soon ensues, and instead of proving debilitating, immersion is in some affections an important medical agent. The human Constitution will bear Considerable transitions of Temperature, providing the air be dry, & elastic; but if accompanied with rain, the firmest System is sure to feel its effects. This circumstance will find an explanation in the fact that water is a powerful Conductor of Caloric. The action is primarily on the skin and mucous Membrane of the Lungs; from thence it may extend its influence to the other viscera by a secondary consequence. These effects will be increased when the body suffers under fatigue, or the lassitude which attends nocturnal exposure. Here we may discover that Cutaneo-pulmonic Sympathy may be the fruitful source of many diseases,

and it is to the action of the Atmosphere that we may trace their origin or development. By the application of cold and moisture, the functions of the Skin become impaired — insensible perspiration is, in part checked and the balance of the circulation necessarily disturbed: vibrations take place from the surface to the centre, which are evinced by slight chills & flushings. The large vessels in the interior are gorged with blood while there is a corresponding torpor of the Capillaries at the surface. By Sympathy the small vessels of the lungs become implicated, the blood is not transmitted with facility, and this state of things frequently continues until inflamation and ulceration are produced. A strong sympathy evidently exists, likewise between the skin and stomach, and is equally dependent on Temperature. For when the organs of perspiration have been unduly excited by the long continued application of heat, the Stomach becomes languid in its functions, the appetite depraved and requiring some

stimulant is set in action. If excessive perspiration, fatigue is added, the fact becomes still more strongly marked: but on the contrary, if the atmosphere is clear & cool, the cutaneous vessels are constringed — the Stomach participates in the change, and a pleasurable glow of health is the consequence. Under certain incidents we frequently find Sympathetic affection existing between the skin and the liver. As we advance towards the tropical regions, perspiration is greatly increased owing to the uniform & extreme heat to which the inhabitants are exposed. That there is an increased secretion of Bile in these Latitudes, there can be no question, as well as from the general appearance of the inhabitants, as the character of the diseases to which they are subject; and the inferred connection is agreeable to reason. It is a well known fact that when this Fluid is secreted in undue quantity, its quality is uniformly vitiated, and its presence in the system is well calculated for the promotion of disease. The sallowness of the complexion and the languor of motion and

expression remarked in the inhabitants of such countries exhibit proofs of this; and it is still farther confirmed by the effects of the residence for a few years in the East or West Indies, on the Natives of North America and Europe. Such individuals rarely return without severe affections of the Liver, which has generally become enlarged and indurated. We sometimes have dysenteric affections apparently originating from cold & moisture applied to the skin: and children living in cold and damp situations and who are destitute of proper clothing, are liable to the most fatal derangements of the bowels.

The origin of many diseases of the Head is now clearly traced to the Stomach and Alimentary Canal: such as Headache - Ophthalmia - affections of the teeth, ears &c. &c. The exhibition of emetics and Cathartics have often been successful in these cases, and when all other means have been tried in vain.

Excessive Venery in men, and copious

discharges from the Uterus in women, have been known to produce the most distressing affections of the Head — such as Epilepsy, loss of sight, &c, in no small number of cases, perfect fatuity.

The presence of Urinary Calculi in the Bladder, is often causative of a pain in the Corona Glandis, and is explained on the principle of Continuous Sympathy by Bichat. Itching of the Anus & Nose, in case of Worms, would also come under this head. The Sympathy between the Uterus and the Breasts may be farther mentioned:— as in the example where no milk is secreted, when the Uterus takes on a diseased action after the child is delivered. The subject might be still farther prosecuted by referring to numerous other Sympathies; but the above seem amply sufficient to establish the variety and extent of these important relations, and to meet the purposes of this Essay. The Sympathies existing between mind and body, might open new fields of inquiry not less instructive than

interesting. Too much neglected by the regular Practitioner it is a powerful engine in the hands of the Empiric. There is a portion of the human body, over which the Mind has not a powerful influence, in those in whom the intellect has attained a certain degree of force. Few physical affections can exist, which may not be moderated, modified, or even overcome by the empire of mind. One of the most remarkable facts connected with our nature is the inherent tendency of man to become as it were a machine, that is to be and act to morrow what we have been and acted to day, — to feel and repeat the sensations and dispositions of yesterday. This harmony, or Sympathy between mind & body, not Counteracted & deranged by habits and necessities to which our nation has not been gradually brought, is probably the source of our physical well being, and its destruction, of the evils we endure. To restore or excite by imagination, this primitive harmony of the system, is one of the most attractive

subjects of human investigation, and whether as an individual or professional study, will, it may be trusted, assume at a future period, a prominent place in practical Science.

An

Inaugural Dissertation

on Opium

Submitted to the Consideration

of the

Provost and Faculty

of the

University of Maryland

For the Degree of

Doctor of Medicine

By

Joseph M. Hoxton

of

Delaware

1833

In the long catalogue of agents which we have for the alleviation of human suffering there are none on which we can more readily and especially rely: which may be exhibited to a greater advantage: and whose influences are more speedily and satisfactorily characterized than narcotics. Without their assistance medical science would still grope in the dark. Although more frequently employed as auxilliaries their lustre is none the paler as primary agents. When tossing upon his sleepless couch wrung by the most excruciating agony. praying that death may speedily terminate his sufferings: the intervention of narcotics seems to act as a potent spell cast over man. Releiving his pain calming his turbulent ravings and recruiting exhausted nature by producing sweet

and refreshing sleep. Or when every remedy has proved unavailing and to physical prostration is added mental anguish augmenting his sufferings till beyond the power of computation: Narcotics soothe and tranquillize his mind and enable him to regard with more calmness and serenity his approaching dissolution

"To welcome the hour that cuts from Earth
And long to press the calm
And peaceful pillows of the grave."

There are advantages possessed by Narcotics over other remedial agents.
Whilst others are limited in their effects and are consequently prescribed only when indicated by certain symptoms of disease of which those symptoms are a peculiarity Narcotics have a broader scope being confined to no especial disease but being beneficial in almost all. Knowing of course the stages in which they are applicable. For although they may be

the only reliable medicine in one state is vicious in another they may be injurious and speedily prove fatal.

The diseases in which we would be most apprehensive of the deleterious effects of narcotics are severe congestive affections of the Cerebro Spinal and circulatory systems their primary excitation being the source of objection in these yet here we are sometimes deceived their application being occasionally of decided benefit although contraindicated by almost every symptom.

There are several drugs classified by the Pharmacopoeia as narcotics which although powerful medicines possess but little narcotic virtues. Their modus operandi being impairment of the nervous sensibility followed by paralysis of the voluntary and

respiratory muscles rather than sedation. Their employment to cause producing death by asphyxia. Of all these the Hyoscyamus is the only one which possesses any marked sedative influence. And acting very well sometimes when Opium has proved useless. Its sedation not being preceded by the excitation which characterizes Opium.
The other agents classified under this head as Stramonium & Belladonna Conium Aconite &c we shall pass by being very seldom or never prescribed when simple narcotism is desired.
From the larger amount of narcotine which it contains Opium stands at the head of narcotics. And indeed not only at head of narcotics may we place it but of all the drugs employed in the practice of Medicine.

There is no subject mentioned in the Pharmacopia upon which so much can be said: Whose efficacy is so universally known: And whose uses and abuses have become so widely disseminated as Opium. It has long been considered an almost magic key to the medical profession. Have gradually and firmly establishing itself as its sufficient merits have become more fully developed. Its well-edged virtues have indeed become its principal source of abuse: Being regarded as an universal pain killer it is administered without foreseeing the effects which it may have upon the System The object being the alleviation of immediate suffering only. The date of its discovery is lost in obscurity. The Poppy was mentioned by Dioscorides. Pliny Hippocrates and others of the olden writers as

as a plant the juice of which possessed narcotic properties. But how far these virtues might extend or of what value they might be medicinally was not known until a much later period.

It was at first cultivated to some extent in the countries to which it is indigenous for the Seeds which contain none of the Narcotic principles of the juice but which being very nutritious were converted by the Natives into bread.

They afford also a peculiar Oil Somewhat Similar in its properties to Olive oil which is used in painting.

The Opium of our market is obtained from the Black and White two varieties of the Poppy which by some botanists have been Considered as distinct Species. The only Appreciable difference however is

that the juice of the Head contains the most Morphia and is consequently the most valuable.
Although the Poppy grows well in the garden of Europe and America the expense and trouble required would not warrant its cultivation as a commercial article. Besides which the climate appears to exert a decided influence upon it.
The method of collecting the Opium is by making Longitudinal incisions in the Capsule of the plant and scraping off the juice which exudes which is then worked by the hand like dough until it acquires a clayey consistency, when it is packed away in the leaves of the plant for use.
We have in our Markets several Specimens of Opium, Comming from different parts of the East each deriving its name from the Coun

ty in which it was raised.
Of all the varieties the Gmyma or Levant is that which is more frequently met with in Commerce. It Contains a larger amount of Morphia and is therefore the most valuable. The quantity obtainable in this is estimated at about 8 per cent whilst it yields also a proportionate share of Meconic Acid. The next in value is the Turkey or Constantinople the average yield of which is about 6 or 7 per cent of Morphia and a little more Meconnin than the other.
The other Specimens the Egyptian the Indian Trebizond Patna &c are all of inferior value decreasing in the Amount of Morphia Contained. Opium of a very good quality has been extracted from Poppies grown in England France & Germany. But is too variable

as regards the amount of narcotic principles.

Although Opium has been subjected to such frequent and careful analysis there are none of the experimenters agree as to the exact proportions of its active properties. Some finding more morphia than others in the same specimen others more meconic acid or codeine which may however in some measure be attributable to the large and frequent adulterations. The principle constituents of opium are morphia narcotine codeine and meconic acid.

Narcotine is a white tasteless inodorous substance resembling in appearance morphia. Alkaline in its nature according to some analyses by others not. Composed of nitrogen carbon hydrogen and oxygen. It is obtained by digesting morphia with sulphuric aether and evaporating the solution slowly

Different views have been advanced in regard to the action and therapeutic properties of Narcotine. By some it has been regarded as the active principle of Opium which is contradicted by other experiments. It was thought at one time to be the excitant and an antidote the Sedative agent. The insufficient Knowledge of its physiological action has prevented its more general employment. It has been lately strongly recommended as an antiperiodic in intermittent fevers.

Codeine is an alkaline salt existing with the Morphia soluble in water alcohol and ether unites also with acids. It is obtained by adding a solution of Ammonia to the mixed muriates of Morphia and Codeia as existing in the Opium. which precipitates the Morphia and crystallizes the Codeia Its constituents are like those of

Narcotine. Nitrogen Hydrogen Carbon and Oxygen. Its therapeutic effects are similar to those of Narcotine and its mode of administration consequently the same. The other constituents of Opium the Meconic Narceine Thebaine Porphyroxin and Pseudomorphia are of no specific value never being extracted for their individual virtues.

Morphia although the chief Narcotic principle of Opium differs somewhat from it in its mode of action. This difference is supposed to arise from the peculiar combination in which it exists in the crude drug.

The Pharmacopoeias differ somewhat in their directions for its preparation. The Morphia of our markets is obtained by a formula adopted by the U. S. Pharm.

℞ Tinct Opium ℥j Aqua Distill

Acetic acid q.s. Ammon. Solut. ℥iij
Macerate Opium for 24 hours in
four pints of distilled water digest
24 hours and strain. Macerate residue
twice in same manner and strain.
Mix infusions evaporate to Oij
and filter. Add Alcohol Oi
Ammon. Solut. f℥iij mixed with
Alcohol Oss. digest for 24 hours
and add Ammonia and Alcohol
as previously and leave to crys-
tallize. To purify these boil with
alcohol Oij till dissolved filter
through Animal Charcoal and
leave to Crystallize.
Morphia is insoluble in water in
its pure state. And as the mode
and degree of its action depend
in a great extent when pure on the
presence or absence and chara-
cter of the acids contained in the
Stomach. it is not so certain in
its effects as its Saline Compo

ound the Sulphate, Muriate and Acetate. The therapeutic action of these is so similar that either of them may be employed with equally beneficial results.

They are anodyne soporific diuretic and diaphoretic but less stimulant and astringent than the Crude opium seldom leaving the headache nausea and other unpleasant symptoms resulting from its use. When the stomach is irritable they are better borne than it is. They are applicable in all cases in which there is not too active congestion to relieve pain and promote sleep. Their action being to quiet nervous centers. When sprinkled over a blistered surface, denuded of the cuticle they exert the same influence in a modified degree as when taken into the stomach. They are valuable in relieving violent neuralgia and sickness of stomach applied to Epigastrium

When given in doses insufficient to produce sleep they cause uneasiness and excitement almost amounting to direct delirium which symptoms subside upon increasing the dose

When given in over doses Morphia speedily produces all the symptoms of Narcotic poisoning which Characterizes Opium demanding of course similar remedies.

The dose of the salts of Morphia is 1/8 to 1/4 grs. which if necessitated may be increased to 1/2 and in some cases may be carried as far as 1/2 grains

A convenient mode of administration is by dissolving one grain of the sulphate in water ℥j and giving ℥ss of the solution at a dose.

Opium exerts its physiological action in a marked manner upon the different organs of the body. In moderate doses it produces excitement of the vascular System of Brain with increased Cerebro Spinal excitation

These Symptoms are succeeded by depression and Subsequent Sleep from which the patient wakes after the effects of the dose have worn off in some measure leaving him with Nausea headache &c from which he soon recovers.

In inordinate doses it produces all the Symptoms of narcotic poisoning. Stupor comes on without the previous excitation from which the patient may with difficulty be aroused; which is speedily followed by coma or profound sleep. This is usually accompanied with actual and complete paralysis of Muscular fibre or greatly diminished power arising as is supposed from venous congestion. In some instances there are delirium and convulsions instead of coma and paralysis. These exceptions are supposed to depend on irritation or

[illegible] usually terminates in congestion.
Another effect of Opium in fatal cases is diminished sensibility to [illegible] impressions [illegible] insensible to light with pupils contracted The ears [illegible] also insensible to sound Respiration is slow and stertorous with slow and full pulse Countenance is pale and ghastly. Sometimes there is vomiting and diarrhoea and if this takes place before the drug has had time to exert its stupifying influence there is a great chance of recovery. The effects of Opium in poisonous doses are all manifest [illegible] in about a half hour after the administration which gradually proceeds producing death in 6 to 12 hours generally. Sometimes it is slower in its results and again may kill in two hours and a half or three

From its general effects upon the cerebro Spinal System we might infer that it would be objectionable in all diseases of the brain and spinal cord: but in some it is of decided benefit: In those cerebral affections connected with or dependent on an excited condition of the vascular system of the brain as Apoplexy Hemiplegia and paralysis it would exert a direct and instinctive injurious effect: But in those disordered conditions of the cerebro Spinal functions which bear no proportion in intensity to the derangement of the vascular system and in those deviations from the healthy functions in which no change in the cerebral circulation can be detected: the administration of Opium is frequently of decided benefit in insanity and delirium tremens it has been beneficially employed

with the bull[?] disease more especially its efficacy being universally admitted. 2 its administration requires to be carefully watched and unpleasant symptoms to be guarded against. 3 If there be fever existing or evidence of determination of blood to the head it is to be used with extreme caution and most generally preceded by loss of blood cold to head and other antiphlogistic measures. There are symptoms occurring in the course of fever which will sometimes justify us in the employment of opium. These are watchfulness. restlessness. delirium. tremor and diarrhoea. Even in these its use must be determined by other circumstances exceedingly difficult to characterize. When they are disproportionate to the disorder of the vascular system or the constitution at large. or when they continue after excitement has been subdued

by proper depletion we may with considerable advantage resort to Opium. Its combination with tartarized Antimony is strongly recommended in cases with Cerebral disturbance. In Spasmodic diseases Opium is of unquestionable value. In local Spasm produced by topical irritants as Spasm of the gall ducts, and of the ureters depending upon the presence of Calculi in Colic and painful Spasmodic Contractions of the bladder rectum or uterus it stimulates the centro vascular system diminishes inordinate Muscular Contraction and lessens the sensibility of the body to pain. In Spasmodic Asthma arising from a spasmodic condition of the Muscular fibres of the bronchial tubes Opium generally gives temporary relief though seldom influencing the recurrence of the paroxysm.

In diseases of the digestive organs
Opium may in a variety of cases
be employed in inflammation be
ing [illegible] only to a slight extent.
Its effects are to allay pain dim
inish secretion and exhalation
from the alimentary canal causing
dryness of mouth and throat ex
citing thirst — allaying hunger
by arrest of digestive function
which is caused by diminishing
the sensibility and contractility
of the digestive organs. In cases
of poisoning by acrid substances
Opium is used with advantage
to diminish the susceptibility of
the alimentary canal and lessen
the violence of their action at
the same time allaying the spas
modic contraction of the bowels.
It exerts a decided but by no
means uniform influence upon
the movements of the heart and

arteries the pulse being in some cases increased and in others diminished in fulness and frequency: the diameter of the artery and the force of the pulse being readily affected by opium. In uterine hemorrhage where there is vascular excitement with great diminution of power it often proves a serviceable agent: also in bronchial hemorrhage with the attendant prostration and profuse secretion. In the latter its most available form is in combination with acetate of lead. Opium exerts its influence over the muscular fibre which forms the muscular agency of the respiratory system necessarily modifying the respiratory movements. Another effect ascribed to it is that it checks the arterialization of the blood by diminishing the supply of nervous agency. It diminishes

the sensibility of the lining membrane of the Trachea and bronchi, exhalation and mucous secretion. it might infer that it would be useful to diminish contractility of muscles of respiration in spasmodic asthma to diminish sensibility of the bronchi in the second stage of catarrh and allay cough by lessening the influence of the cold air. And finally to counteract by excessive bronchial secretion which might produce suffocation. On the Cutaneous System in addition to the general effect of diminishing sensibility it exerts a diaphoretic and sudorific action producing profuse perspiration occasionally accompanied by pricking and itching of the skin. It is therefore adapted to the relief or pain or excessive sensibility of the skin and to promote perspiration.

The constitutional effects of Opium depend upon the absorption of its active principles & its essential and primary operation is upon the Cerebro Spinal System acting as an alterative increasing diminishing or altering the energy of the vital actions of the brain and nervous system. As its operation is distinguished by positive and negative characteristics. The positive being relaxation or paralysis of contractile tissue a tendency to sleep contracted pupil and constipation. The negative are tetanic convulsions delirium dilated pupil syncope coetus intestinal irritation and universal numbness.

Opium is given in substance in pills powder and electuary.

The dose is subject to great variation which depends on the age and habits of the patient the nature of the disease and the object we wish

to accomplish by its employment.
Generally 1/10 to 1/2 grain we term a small
sized dose for an adult: which amount
is given to persons unaccustomed
to its use when its stimulant effects
are required in catarrhs and diarrhoea
From 1/2 to 2 grains is considered a med
ium dose as an anodyne and sopor
ific. From 2 to 5 grains a full or
large dose is given in excessive pain in
violent spasm and tetanus: and it may in
these cases be employed in greater quantity still
In cases of poisoning by opium the
first indication is to remove the
poison from the stomach: the second to
neutralize any which may be retained
in the system: the third to obviate its
injurious effects.
In the place of the more powerful
evacuants we should have recourse
to tickling the throat with a feather.
Mustard or salt may be administered
as an emetic. The stomach pump

is the most reliable of all means. For from the sedative influence of the drug over the muscles concerned in emesis it is exceedingly difficult to evacuate the contents of the stomach by ordinary means. The emetics usually resorted to are the sulphates of zinc and copper. The former is preferable in doses of 5 to 15 grains the latter if employed from 1 to 2 scruples. Ipecacuanha or tartarized antimony may be used either internally or as enemas. In extreme cases a solution of antimony 1 or 2 grains to the ounce may be injected into the veins taking care to prevent the introduction of air.

Chemical agents have been employed to destroy the activity of the opium. The best of these is infusion of galls though an imperfect remedy. Magnesia Iodine and Chlorine have all been used but

with little or no success. The principal means employed were frequently and Rousing the patient by walking him up and down the room for some time. Pouring cold water over the head and chest. The application of irritants blisters and sinapisms to body and feet. Venesection is sometimes necessary after the drug has been removed from the stomach. Stimulants. Ammonia Camphor and Musk are sometimes of advantage. The vegetable acids also have been of advantage after the opium has been withdrawn from the stomach. Artificial respiration is another resort sometimes successful in connection with Electricity and should never be omitted even when the motions of the lungs have been suspended sometime. The Electricity Keeps the patient aroused frequently until the respiration has almost entirely ceased.

There are several officinal preparations

of Opium although but 4 or 5 are in general use. The first of these most employed is the Extract. The Formula for which is. Sliced Opium one pound Aqua Distill Ov. Macerate for seven days and filter. The dose is from gr s p to iij or even v grains. It most generally employed only when Opium or its preparations disagree. The next is Tinct Opii Formula. Cub Opii ℥iij Dilute Alcoh Oij Macerate and filter as in Extract. The strength of this preparation is about ♏xix to ♏sj of the Crude drug. The dose is for an adult from ♏x - f℥j. From its quick absorption into the system it requires more careful administration than it generally gets. The third of these preparations is the Acetum Opii which is about equal in strength to the Tinct. The formula for this is Sliced Opium ℥iv Acetic Acid distilled f℥xvj Macerate for 7 days and filter. It is employ

ed precisely like the Tinct. the dose being about the same. It is not so generally used as the Tinct. being only employed when a combination of simple acid is desired with Opium.

The Vinum Opii is occasionally employed more frequently in children being much pleasanter to the taste though its strength is more variable. The Formula is Ext. Opii ℥iij. Cinnam. Cloves aa ℥ij. Sherry Wine oj. Macerate fourteen days and filter. It has been beneficially employed as an application to the eye in Ophthalmia. The dose is from ♏xv to f℥ij.

Tinct. Opii Camphorata is a prep which is used very extensively and with a great deal of benefit. The Formula is Pulv. Opii Acid Benzo. aa ℥j Of Anise f℥j Clarified Honey f℥ij Camphor ℥ij Dilute Alcohol oij Macerate 14 days and filter. D f℥j — ℥ij —

The other preparations are not frequently used —

An
Inaugural Dissertation
On
Remittent Fever.

Submitted to the Examination
of the
Provost Regent
&
Faculty of Physic
of the
University of Maryland.
For the degree of Doctor of Medicine.

By
Albert R. Simons.
of
Somerset Co.
Maryland

## Remittent Fever.

This form of Fever seems to be most prevalent in the middle and Southern sections of the United States, yet it is by no means peculiar to this country. As we are told by several writers upon the subject that it prevails in France Italy and in other parts of the South of Europe. also in Africa and in fact it occurs in all hot climates. It sometimes prevails in many of the more northern States where the disease is not one of usual occurence: during a Summer of exceptively hot weather, and is chiefly confined to those situations noted for their insalubrity.-

The principal cause of the disease as may be seen from the foregoing remarks is an unusual degree of atmospherical heat, aided no doubt by impurities of the atmosphere arising from various unhealthy localities.
Remittent Fever need scarcely ever be mistaken by the least experienced Physician, nevertheless it exhibits great diversity in many of its phenomena in different seasons and also in different individuals.
In many cases the remissions are well marked, approaching in some degree to a complete intermission, while in others the remissions are so slight that the Fever has almost a continued form. There are generally

prominent symptoms present which will lead us to a correct diagnosis. The most valuable of these are, Gastric irritability a sense of weight and oppression about the Epigastrium, Severe pain of the head back and limbs and the early prostration exhibited by the patient,

There are several varieties of this form of Fever viz; The Simple Inflammatory and the Malignant, I shall speak of all these in their turn. 1st the Simple, The patient for some days is exceedingly listless feels a sense of languor and debility and has a bitter taste about the mouth nausea and a disgust for food, He experiences

an uneasiness and sense of fulness about the Epigastrium. Sometimes costive, and generally more or less pain and heaviness over the eyes. The attack is usually ushered in by a chill or merely by a sense of coldness about the back, which after a short time is followed by increased heat of the surface, the skin at the same time becoming dry and constricted face flushed, the eyes become red and suffused, respiration hurried, pulse more frequent but rarely tense, also great restlessness is manifested.— The patient now complains of great pain and sense of fulness of the head, pain in the back and extremities, Stomach is more or less irritable, vomiting is

not an unfrequent symptom.
The matters that are ejected are
of a yellow greenish color and of
a bitterish taste. consisting prin-
cipally of bile. Tongue moist
and covered upon its upper
surface with a white or yellow-
ish fur. which acquires con-
siderable thickness. Costive state
of the bowels a diminished secre-
tion of Urine and high colored.
The exacerbation lasts from ten
to sixteen hours, when a gradual
abatement of all the prominent
symptoms take place, and a
moisture breaks out upon the
surface and the patient falls
into a refreshing sleep. occasion-
ally however the skin continues
dry after the heat has subsided
and the patient restless and

not inclined to sleep. The remission varies in duration according to the violence of the attack from two to ten hours. When again the heat of the surface increases, marked by the same degree of intensity as the former or even by increased violence. Now all the symptoms appear in an aggravated degree and the remissions are less distinct and marks what has been termed the Inflammatory form. During the exacerbation the skin is intensely hot, eyes suffused and of a yellowish red, there is also great nervous disturbance, pain and tension of the head, and sometimes delirium is present. Sometimes a sense of oppression

is felt about the chest, respiration is quick and laborious pains in the back and limbs are extremely severe, with great vascular excitement, frequent pulse more or less tense. Great nausea and vomiting, matters discharged are of a thick ropy fluid, of a yellow or greenish color, Bowels are costive, or if open the discharges are unnatural, there is always great restlessness and jactitation. Skin acquires a yellow tinge most marked upon the face and breast, All the succeeding exacerbations are marked by an increased violence of all the predominant symptoms, and unless the disease is arrested by an appro-

priate plan of treatment the powers of life gradually sink. The Malignant Congestive or Pernicious form as it is sometimes called, comes on very mild in some cases, though more generally all the symptoms are more aggravated, — the livid color and coldness of the surface is very remarkable in this form, and also covered with a clammy sweat as in the collapse of Cholera, yet the patient complains of great heat, pulse small and corded, blood is sometimes vomited, extreme wrestlessness and jactitation is observed. Delirium and Coma supervene, the tongue has a dark brown or black appear-

ance, such cases may termin-
ate fatally in a few hours,
This congestion of the vessels of
the Brain seems to depend
upon an impeded action of
the heart and lungs, which
causes the blood imperfectly
aerated to accumulate in the
interior organs and thus pre-
vent the regular exercise of
their functions,
The complications with this
form of Fever are numerous,
the first of which we have is
Inflammation of the lining
membrane of the Stomach -
Dysentery may be set up in the
course of the disease, also the
liver may be diseased, the
Brain is more or less effected,
Bronchitis and Pneumonia

may be set up and in the cold
Stage we may have Pneumonia.
The Spleen may also be affected.
But the most uniform lesions
are to be found in the Stomach
and Liver. - The Stomach is
found to be injected with in-
creased redness of the mucous
membrane, with sometimes soft-
ening and thickening of that
membrane, In some instances
the same appearances are said
to be found in the Duodenum.
The liver becomes enlarged and
inflamed, the color is changed
to a bronze or leaden hue, also is
in a softened and flabby con-
dition, indeed this is the most
frequent anatomical lesion
that we meet with in Remit-
ent Fever, occasionally there is

effusion in the membranes of the Brain, also the Lungs will sometimes be found congested. though these latter are not invariably present. The duration of the disease varies a mild case may continue for two weeks and the Malignant or Congestive form may last only for a few days.

Prognosis. In the milder forms of the disease and with distinct remissions and when they occur in persons of temperate habits the prognosis will generally be favorable. In the Inflammatory when vigorously treated from the onset you generally may expect a favorable termination. But in the Malignant or Congestive forms of the disease the

prognosis is much more favourable. The favourable symptoms in any case is the mildness and shortness of the exacerbation and the length of the remission, and particularly when it is accompanied by a free and diffused perspiration, and when the patient falls into a refreshing sleep, also when the internal organs are less effected. When healthy discharges from the bowels occur, and the tongue becomes cleaner and the pulse assumes its natural frequency these may be ranked among the favourable symptoms. —

Causes. Remittent Fever as we have already remarked seems to be a disease peculiar to hot climates. It is doubtful whether it can be

produced by exposure to a high degree of atmospherical heat, but this is a question which has been frequently agitated, notwithstanding a long continued exposure to excessive heat combined with other Morbific agents will bring on an attack independently of Malarious influence, The disease is most apt to occur in those who after exposure to the sun for many hours in intensely hot weather allow their bodies to cool off too suddenly by lieing on the damp ground or neglecting to change their clothing after having been wet by a shower of rain or some other cause, There is no doubt that it does arise from Malarious poisons existing in

the atmosphere which may be produced by the decomposition of many vegetable matters.-

Treatment. This will vary according to the form of the disease. Of which the Simple requires no very active means. the bowels should first be evacuated by a mild aperient, and then the antiperiodic remedies should be resorted to. at the head of which stands cinchona and its preparations. Quinia is the one most generally used in this country. This agent should be employed until its full effects are produced.

In the Inflammatory form a more active plan of Treatment is demanded,

To subdue local excitement; Blood letting has been recommended. When you are called to a patient with a hot skin, face flushed and turgid; severe pain of the head back and loins. Blood should be abstracted, though I do not believe general Blood letting is often required, and should never employ it except in extreme cases. Local abstraction of blood is always more preferable and is attended with more success. In fact I believe general Blood letting is now entirely abandoned by the practitioners of the present day. In the stage of active excitement cold may be applied to the surface with great advantage,

Cathartics are next to be resorted to, they will often be found beneficial by removing from the intestines unhealthy secretions with which they may be filled and producing healthy stools and by reducing the congestion of the portal system and thus restoring healthy functions of the Liver and of the digestive organs generally. –

Calomel is probably one of our best Cathartics in this disease, it may be given either alone in a full dose and followed by Castor oil or some other mild aperient, or may be combined with some cathartic agent such as Rhubarb etc, after having cleared out the bowels Quinia

should be given in very free doses from v to x grains every two hours until its specific effects are produced. This may be given when a considerable amount of fever exists. It has been recommended to administer this agent at once, immediately upon the inception of the disease without any preparatory treatment which in many cases is followed by marked benefit. Diaphoretics may also be given with advantage, of which the Sweet Spir of Nitre is a good one also the Citrate of Potash is used for its refrigerant properties.

In the Malignant or Congestive forms the indications are to rouse the nervous

Energies of the System and to relieve as quickly as possible the central organs from their state of hyperaemia and restore to the Capillaries their healthy action. The most important of the remedies calculated to produce these effects is the application of heat to the surface in the form of warm bath or bottles of warm water. External Stimulants such as Sinapisms applied to the extremities and over the Epigastrium; Internal Stimulants are calculated to do injury rather than good and therefore rarely employed. When a reaction has been induced a Cathartic will be of use in Clearing out the bowels,

Calomel may be given in combination with some other Cathartic agent, with regard to the abstraction of blood in the treatment of this form of the disease it is as a general thing rarely employed except locally, by means of Cups or leeches to the head or chest, or in the neighborhood of affected organs, This will often be found decidedly beneficial. Quinia should be given in large doses X, XX up to XXX grains may be given at a dose, without regard to the existence of fever, Of the curative powers of this agent in this form of Fever we have the most unquestionable testimony, many of our Southern practitioners

place their chief reliance upon Quinia in the treatment of the Malignant and Congestive forms of Bilious Fever. During the period of Convalescence the patient should be guarded against the effects of sudden changes of temperature, and from incurring the least degree of fatigue by sitting up too long at a time. The bowels should be kept regularly open, either by allowing the patient to partake of such articles of food as will have a tendency to relax them or a mild aperient may be administered occasionally. Great Caution should be observed in regard to diet, it should consist of mild

farinaceous articles of food,
and if there has been much
prostration a glass or two
of wine would not be
improper. Should the ap-
petite continue weak and
the digestive powers feeble
frequently some bitter infus-
ion, such as Columbo Quas-
sia or wild cherry bark
will be of service to increase
the tone of the stomach, in
all cases, small quantities
of food should be allowed,
exercise in the open air should
not be taken untill the pa-
tient has acquired some
degree of strength, and then
the weather should be extreme-
ly mild otherwise a relapse
may occur, — —

and should the patient
be a man of sufficient
means a trip to some
agreeable watering place
will often restore him to
perfect health, more quick-
ly than were he to remain
at home, where his mind
would be too early directed
to the concerns of his family
and of his profession. —

# An

Inaugural Dissertation on

# Syphilis

Submitted for the examination of the

Provost and Regents

And

Faculty of Physic of the

University of Maryland for the

Degree of Doctor of Medicine

By Moses McLane

of Balt. Md.

February 4th 1855

Gentlemen having complied so far with the technical requisitions viz: matriculation, and attendance upon lectures, I shall now endeavor to comply with that other requisition viz: the deposit of a thesis of my own composition. I find it stated that the judgment of the faculty upon the fitness of a candidate is based upon their knowledge of his general attendance and industry character and habits, as well as upon the result of his final examination. I know it would be unbecoming for a student to boast of himself on account of diligence and his desire to learn, but I rejoice to state that I have endeavored to make the best use of the advantages of this noble school, but how far I have been successful in acquiring the necessary knowledge in order to graduation the faculty will be able to judge. I am sorry that I am not better prepared to enter upon the [illegible]

of a medical man, but I promise that I will be a better medical man as I practice this science or until I shall bid adieu to this world and close my eyes in death.

## Syphilis.

There is no subject in the medical science especially in our age, which deserves the attention of a physician more than the one now under consideration. When we contemplate nature and all the works of the creator around us, we behold that everything is perfect beautiful and good and are compelled to say: "All his ways are ways of pleasantness and all his paths are paths of peace". But if we then bring to our view the individual that has fallen a victim to this awful disease syphilis, and see how terribly disfigured he is, we are constrained to ask, in whose hands

has his fellow and to what marks is he subject. Man then brings the disfiguring, the body and soul destroying disease upon himself, by trespassing the laws of nature and of God and has to suffer the consequences, more or less in his own body and his descendants sometimes after him to the third and fourth generation. Syphilis then, is the subject to which I shall endeavour to turn my attention in writing these few pages, and I shall speak about the treatment of the disease. I have not chosen this theme, because it is more pleasant than any other, not because this disease is easier discussed, or treated with a better result than another, but because by so doing I may become more acquainted with the subject myself and learn to treat it with a better success. It is my opinion that a venereal desease in its worst stage is harder to cure than almost any

other disease to which the human subject is exposed, or with which he can be afflicted; and some authors of good authority, doubt whether syphilis can be cured or ever was cured, after the disease had become constitutional. Primary syphilitic ulcers or chancres may be caused by the application of the syphilitic virus to any surface, mucous or cutaneous, entire, wounded, or ulcerated. The external organs of generation are generally the seat of the disease: in the male the inner surface of the prepuce and the parts around the frænum are most always the seat of chancres because, as it is believed, filth and uncleanliness in these most common. It is believed by some, that in, from three to ten days, after the contraction of the disease, sores generally make their appearance, sometimes in a less and other times in a longer period. In females chancres generally appear along the vulva and the

surrounding parts. It is believed that a phagedaenic ulcer has a tendency to reproduce its like, and that other different varieties [illegible] the state of the constitution. Syphilitic ulcers may be divided into indurated, non-indurated and [illegible] ulcers. The indurated [illegible] makes its appearance on the glans penis, and begins as a small pimple which is deep and excavated; the base and edges are often as hard as cartilage, but generally are not as hard as the body of the penis. The patient at first feels a stretching and a pressure in the parts, then a hard, painful swelling makes its appearance with one or more glands, which are movable under the skin. This swelling increases and the skin around becomes red, and the pain more severe. It [illegible] may scatter itself, but if the pain becomes very persevereing, it is almost

certain that it will break out in ulceration. The non-indurated chancre is most always found on the inner surface of the prepuce. At first it is merely a small, but very itching pimple which grows and displays a dull yellowish red, and this is attended with redness and swelling which spreads circularly; and if the ulcer is seated near the fraenum, it is very often perforated; if ulceration does not spread it will be difficult sometimes to say whether it is a venereal ulcer. When a venereal desease has spread itself through the system it generally affects different parts and breaks out in different places over the body. From the time the desease first makes its appearance it generally takes about six weeks until it becomes general or until it has infected the whole system; its general appearance is complicated with a slight fever

and a burning heat in the palms of the hands. The mucous membrane of the throat becomes very often inflamed, similar to an affection of catarrh which obstruct the nasal pasages and causes a difficulty in swallowing, hoarseness and tears in the eyes. By an examination of the throat internally we find the mucous membrane redened and the tonsils sloughing or ulcerating; and in the mouth inside the cheeks we often find ulcers which spread very rapidly and destroy the gum, and at last the bones of the nose; this causes a flow of a very offensive nature from the nostrils. On the skin, syphilis shows itself in patches and pustules which are often numerous in the face and on the forehead at first their colour is light red, but afterward changes to a copper colour. These pustules are surrounded

by a brown red edge) and are sometimes single, but often they run together and cause considerable itching, especially at night. if they break out on a hairy surface, the hair comes out, and if under the nails, these will come off. Very often syphilis breaks out in the palm of the hand, along the thigh, about the genitals and groin. When syphilis has affected the bones it will be felt by haveing piercing and gnawing pains especially during the night. Hollow and subcutaneous bones are generally affected as the tibia, the ulna and radius, the sternum, clavicle and skull. If the disease proceed one step further a quantity of glairy serum is effused between the periostium and the bone, producing an exquisitely painful fluctuating tumor. If the disease still goes on the bone

become various: the patient suffers severely from the pain and discharge and if the desease goes on, on the head, death may soon follow from protrusion of the brain or from irritation of the dura mater. These bones often swell to a considerable size, perticularly the tibia, which is generally complicated by a severe headache, and inflamation of the marrow may be the consequence. A severe case of this desease depends much upon the constitution and the age of the patient; in a strong and robust constitution the desease is always worse, and advances with greater rapidity. The climate, it is believed, has some influence and the presence of other deseases. A true syphilitic chancre is characterised by its roundness, its hollow form, its hard surrounding edge filled with pus and without granulation.

In the prognosis of syphilis we have to take into consideration the following particulars: Primary syphilitic ulcers are easier cured than secundary; and an accomplicating desease of a debilitating character always makes a perfect cure of this desease doubtful, and may cause a cure to be altogether imposible. Again the more recent the desease was contracted, the more favourable is the prognosis; we must also recollect that when the bones are deseased a cure is attended with great difficulty and of course requires a much longer time. In a warm climate or in the summer, the practitioner most always has a better prospect of accomplishing a cure, than in the winter or in a cold climate. Pregnant women, that become deseased after their conception, very often bring on abortion. If, after the use of primary syphilitic ulcers, bone scars remain, a

return of the desease is always to be suspected. Treatment: In treating primary syphilitic ulcers we have always to be careful to avoid a constitutional or general desease; it is therefore expedient not only to attend to the desease locally, but also to guard against more violent symptoms or against constitutional syphilis. The local treatment has in view the destruction of the poison in the ulcer and the external leaving; and by making use of suitable remedies perseveringly a cure is at last accomplished. If a chancre lasts for a few day only it will be advisable to touch it thoroughly with nitrate of silver; a low diet and rest must be insisted upon; a flannel rag wrung out of warm water may be laid over the ulcer and if much irritation is present a poultice of boiled camomile flowers may be

applyed, and a salve of red or white precipitate may be laid upon the ulcer with great benefit. Great care and regularity is necessary in cleaning the parts daily. If their is much inflammation present lenitive and palliative means are used. Internally we may give at the same time a mild preparation of mercury but the patient must not only keep himself confined but he must be temperate and aught not to use anything stimulating or that contains too much acid. Chancres with a very hard edge that spread very rapidly are sometimes cured by giving red precipitate internally and by applying nitrate of silver externally. the local treatment however may be injurious where their is much general irritation presant. If a cure of the ulcer should be accomplished by this local and general treatment it will be

necessary still to continue to give small doses of mercury for some time. The treatment of buboes must be according to the inflammation which is present and when very painful the patient has to keep himself in a perfect state of rest and [illegible] poultices and fomentations may be applied. The practitioner must always be careful not to confound a bubo with aneurism or hernia. The idiopathic bubo has a natural tendency to suppurate and therefore if it does not disperse soon it will be better to give time and continue cataplasms until it opens of itself; this treatment may be continued afterward to soften the edges of the ulcer. The parts may be painted with a strong tincture of Iodine. [illegible] clothes and keep the skin perspirable. A strong mercurial ointment should be rubbed in daily upon the inside

of the thighs, arms, &c. and when the skin becomes irritated, it should be washed well. In a recent contracted case of syphilis, mercury given internally is preferable to the use of that same externally. Where their is redness of the fauces and sloughing of the tonsils with fever, mercury must be discontinued, till leeches, gargles and aperients have set the throat to rights; then it may be resumed in small doses. For the cure of diseased bones we may apply a poultice of cicuta and rub with a salve made of mercury and Opium. Salivation is not necessary in all cases in order to cure syphilis; and as theirby the further use of mercury is impeded and the teeth for ever destroyed, it is therefore advisable to intermit the drug as soon as the preceding symptoms of salivation are felt or seen, but after these symptoms

have disappeared the drug may be continued. But if the disease is of long standing and has extended the whole system, it may be of great benefit to salivate the patient.

Mr. Hannan says: "In every primary ulcer, I would give up the idea of using mercury at first, treating it as if it were a simple ulceration, by cleanliness, rest and abstinence and applying to it the most simple and mildest dressings. If the sore does not improve in a reasonable time, more active dressing must be used. A simple venereal ulcer usually runs its course in spite of remedial applications; warm emollient poultices should be applyed, until the crust comes away. A weak solution of lead may be laid on the parts on lint, and sometimes a solution of the sulphate of copper, or a weak

solution of lunar caustic, in order to stimulate the ulcer. In an early stage of the disease, [illegible] may be of some benefit, [illegible] poultices and rest patient. When phimosis [illegible], emollient poultices, efficient blood-letting and nauseating doses of antimony should be given; matter often forms under the integument of the penis and then a free incision must be made into the dorsum penis. When the constitutional irritation is considerable, purgatives, antimonials, nitre and other diaphoretics will be necessary. In the indurated sloughing ulcer Iodide of Potassa may be given in about grs. x doses 3 times a day, or as others would recommend, mercury in sufficient doses. But when the constitutional irritation is high, with a disposition to gangrene, great anxiety, heat and dryness of the skin,

bread lozenges and small quantities of the tinctures, mineral antiphlogistics are indispensable. Among the substances Opium, Lycopodium and Cuba may be given. Syphilis is sometimes treated in a different manner both in Europe and in this country, in private as well as in Hospital practice, but with what result, I am not able to say. In primary syphilitic ulcers as long as there is any inflammation present, local, and where there is considerable inflammation, general blood letting would be recommended in the first place, especially in phimosis and paraphimosis: the patient is positively forbidden to change his horizontal position, takes laxatives, and an antiphlogistic diet. The local treatment depends altogether upon the nature of the parts. In painful ulcers with raised hard and uneven edges, softening fomentations and poultices are applyed with a solution of lead

sulphate of zinc, copper, limewater &c
In phagedenic and gangrenous ulcers,
as long as there is yet inflammation
present local blood letting, antiphlogistic
softening poultices and fomentations
are resorted to. In indolent ulcers
somewhat stronger stimulating local
means are employed. by this treat
ment ulcers about the genitals are
often cured in a very short time.
Bubos are bandaged and leeches
applied; and if suppuration takes
place, sulphate of copper or sulphate
of zinc is applied, and the abscess
opened and treated as a primary
ulcer. It seems to me very doubtful
whether this plan of treatment would
be sufficient in very violent and
persevering cases, where the bones
are affected, the throat ulcerated
and the whole system penetrated
with the poison. I would then
in the first place give mercury-five

grains of blue pill every night and morning until the mouth would become affected and if the sorenes would subside too soon, I would increase the dose. Or I would make use of the Iodide of potassa, as a substitute in doses of grs j iij. Sarsaparilla also is often used in the treatment of syphilis.

Thus Gentlemen, I have finished these lines, and must now hand them over to your consideration, as the worthy faculty of the

University
of
Maryland

Moses McLane

A Thesis on Aneurism.

Submitted to the Provost Regent

and Faculty

of the University of Pittsburgh,

for the degree of M. D.

N. R. Smith. Pa

other, or both are. This however is a very rare [illegible]. The parts [illegible] which the coats of the artery [illegible] compose the sac, but are divided. It may exist either primarily or secondarily. Primary when the [illegible] wounded at once through. [illegible]

[illegible] of the [illegible], or [illegible] an abscess of the neighbouring parts [illegible] to form the sac. False aneurism exists in [illegible], circumscribed, and [illegible] diffuse, and [illegible]. In the [illegible] rounding cellular tissue. In the cir- [illegible]

[illegible] when the greatest [illegible] of [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] formation is another, though a less common [illegible]. These [illegible] [illegible] the [illegible] of the [illegible] [illegible] [illegible] passage of [illegible], and the coats on the carotic [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] way at [illegible] [illegible] [illegible] [illegible] forming false aneurism. This degeneration, [illegible] [illegible] [illegible] [illegible] [illegible] in the larger vessels, and at the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] off. Hard drinkers are liable to [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

The tumour is at first soft and compressible, and the pulsation of it is evident both to the sight and touch, and synchronous with the action of the heart. The tumour is not merely raised by the pulsation, but on being grasped by the hand, may be felt to expand throughout at each impulse of the heart.
As the disease advances, the pulsation becomes less distinct, owing to the deposit which is going on within, thickening the walls, it also becomes more difficult to press out the contents of the sac.
Thus the absence of pulsation is no positive proof of the non-existence of aneurism, as on the other hand its presence is no certain proof that there is one.
Bruit [illegible] is an important symptom, heard on the application of the ear to the tumour. This is no positive sign of disease when taken by itself, as it may be [illegible] and may be [illegible]

aneurism. There is a peculiar thrill communicated to the hand when placed on [illegible] the tumour, caused by the rushing of the blood over the roughened walls of the sac. Pain is more generally a symptom of this, than of true aneurism. When the coats of an artery are suddenly ruptured, pain is often experienced as if the part had received a sharp prick. The Pain in many cases in these aneurisms as a result of the tumour pressing upon the surrounding parts. As in aneurism of the arch of the aorta, the trachea may be pressed upon causing dyspnoea. Or when the [illegible] is [illegible] the oesophagus may be [illegible], the [illegible], a [illegible] [illegible] [illegible] pressure [illegible] the tumour. [illegible] [illegible] the part of the vessel in the [illegible] [illegible]

pressed out, thus far resembling oedema. but when the pressure is removed it does not return [illegible] [illegible] it [illegible] [illegible] [illegible] [illegible] [illegible] pulsation. [illegible] the pulsation [illegible] -gularly [illegible] [illegible] [illegible] [illegible] direction [illegible] [illegible] [illegible] whether it be downwards, laterally or [illegible] [illegible] [illegible] [illegible]. tis [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] an [illegible], [illegible] [illegible] [illegible] is felt upwards, in this case, if the tumour [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. In one case the tumour is [illegible] raised, in the other it is expanded [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. In cases where the trachea has been pressed upon, causing [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] ing of the chink of the glottis.

The facility with which a coagulum may form in an aneurismal sac; depends [illegible] and mode of connection with the artery. [illegible]

[illegible] one; it is difficult for a coagulum to [illegible]

[illegible] the trunk of the vessel. In this case the [illegible] from the [illegible] commence. Deposit takes place yet [illegible]

violation of the
bring about a favourable result.

introduced the practice of not meddling
with the [illegible] of the [illegible]. The
practice of [illegible] the [illegible] at a distance
from the tumor was first [illegible]
by Hunter. Though this [illegible]
the [illegible], who claim the
[illegible]
[illegible]
[illegible]
[illegible]. The effect of
the application of the ligature, is the im-
mediate [illegible] of [illegible]
[illegible], and the arrest of the flow of blood
as high up as the first collateral [illegible]
[illegible]
[illegible]
collateral branches it soon becomes restor-
ed to its natural [illegible]. The [illegible]
[illegible]
The effect of the ligature on the [illegible]
[illegible]

Dr Jones was the first to propose the division [illegible] above, the operation however fell into [illegible] and was abandoned. Wardrop [illegible] to the one of the terminal branches, this [illegible] also fell into disuse and is now seldom employed. An injection [illegible] has been used, to cause the formation of [illegible]. This is however a dangerous [illegible], from its tendency to [illegible], resulting in [illegible], so that in many

cases in which it has been tried, the operation of applying the ligature has been found insufficient to arrest the hemorrhage. The remedy from which most is to be expected, and which has been lately revived, with many improvements, is that of pressure. Formerly, constant, and severe pressure was applied at the first: this often resulted in the sloughing of the limb, and even in some cases caused fatal hemorrhage. Pressure as now used is neither so severe, or so constant as was formerly thought necessary. It is generally applied directly over the tumour, but it may also be made at a distance from the seat of disease. Pressure is made either by the compress or by a slight weight laid over the tumour. It is not necessary that the sac should be completely [illegible] in order to effect a cure, it is only requisite that the current of blood should be interfered with, in order that time may

be given for the formation of a coagulum. The employment of galvanism by acupuncture is another remedy which has been used, in order to bring about consolidation of the contents of the sac. Should an aneurism arise from a wound, the coats of the vessel being in a healthy condition; it is to be treated with the ligature: applied directly above and below the wounded part.

# Inaugural Dissertation

On

# Intermittent Fever.

Respectfully Submitted

To The

Provost. Regents

&

Faculty of Physic

of

The University of Maryland

For The Degree

of

Doctor of Medicine

By

Anselm W. Neal

of

Talbot County

Maryland

# Intermittent Fever.

Malarious Fever, whether Intermittent, or Remittent, depends on its origin upon a specific cause, known by the name of marsh miasma.

What the essential nature of this subtle agent is, has not been ascertained; it is conceded however to be a poisonous emanation of marshy or swampy districts of country, and is exhaled chiefly during the latter part of Summer, & in early Autumn; the conditions upon which its formation seems to depend are a certain degree of heat, and a moderate amount of moisture. Where the temperature is less than 60 deg. Fahrenheit, and unless a temperature, at least as high as 60, continues for a considerable length of time, it would seem that but little if any of this peculiar poison is active, and where moisture is either wholly absent, or in excess, none of the effects of malaria are manifested.

Of the Intermittent type of malarious fe-

over these are several subordinate varieties, the most common of which are the Quotidian, the Tertian and the Quartan, and of these three varieties there are also subvarieties, as the double and duplicate variety of each; these latter however are rare, as are also the other forms of the remittent Fever occasionally met with, to wit, the Quintan, Sextan, Septan &c., in which latter the intervals are lengthened, as their names would imply.

The most common variety of this type of Malarious Fever, is the Tertian, or that whose paroxysm recurs regularly on the third day from that on which the previous paroxysm occurred inclusive; next in frequency the Quotidian, and least frequently of the three, the Quartan.

The latter part of Summer and beginning of Fall, seem to be the season of the year most prolific of malarious fevers, though they are by no means confined exclusively to this or any other particular season; on

the contrary we find them occurring alike in midsummer & in midwinter, in the Spring as well as in the Fall; yet it is claimed by some authors that the poison is not generated at any other season than in the latter part of Summer & beginning of Fall, and that cases that occur at other seasons of the year should properly date the period of the commencement of their incubation to that particular season; whether this be true or not, I will leave others to decide, though I see no sufficient reason why malaria should not be produced as well at one season of the year as another, provided the conditions of Temperature & moisture upon which its production depends be present.

Intermittent Fever has been divided by authors into three stages, which may be more or less distinct in any particular case; these are the cold stage, the hot stage, and the sweating stage; before adverting, however, to the phenomena that

characterize these different stages, it may not be amiss to allude briefly to what is called the period of incubation, and the precursory symptoms of this disease.

By the period of incubation in reference to [illegible] as of any other disease that owes its origin to a specific poison, is that period which commences with the reception of the poison into the system, and terminates with its development in the form of the disease.

This period is by no means fixed in the disease which I am now considering, on the contrary it is extremely variable, owing to different causes, the principal of which perhaps are the intensity or quantity of the poison inhaled, and the susceptibility of a particular constitution to its influence.

The precursory and premonitory symptoms of an attack of Intermittent Fever are generally well marked and tolerably uniform; for some time, — perhaps for several days before the

disease breaks out. — it manifest itself in a kind of general listlessness or apathy of its victim; he feels an unwillingness to make any kind of exertion either physical or mental, his appetite fails, and he becomes fretful and cross. he has headache too, and dull heavy pains in his loins and extremities; if his tongue be examined it usually presents a furred appearance. — these symptoms continue and increase, until at length the pent up poison seems to explode, and the whole system is suddenly prostrated. Here commences the open onset of the disease, — the cold stage has set in; this may commence abruptly, or come on more gradually; frequently in patient just preceding the chilly sensation in the spinal region. Then the nose and lips and extremities grow cold and finally an universal chilliness pervades his whole system, and he suffers from a feeling of intense cold; this

disagreeable sensation is generally accompanied by severe pain in the head, back, and limbs, — the blood seems to have measurably deserted the capillaries, and not only the face but other parts of the system present a pale anæmic appearance, the patient shivers with cold, his teeth chatter, and the powers of life seem to be greatly depressed; in the pernicious or malignant varieties of this disease, the patient may succumb to the violence of this stage in the first paroxysm; for more frequently however in ordinary attacks of the disease, the cold stage soon runs its natural and regular course in from two to six hours, and is succeeded by the second stage, — the Hot Stage or stage of reaction. Now the sensation of cold has disappeared, and the opposite extreme, excessive heat supervenes! The pulse which but a short time before was tranquil and small, suddenly leaps into a rapid pace, and becomes preternaturally full

and strong. the blood returns to its distant outposts; and the the surface which but a little while before was pale and cold and bloodless. is suddenly lighted up with a vermilion hue. and the blood seems ready to burst from its transparent covering.

The skin becomes dry and harsh and hot. the headache is greatly exagerated. and assumes a throbing character. the lips and mouth are dry and parched. excessive thirst is experienced, nausea may be felt. and sometimes congestion of the brain manifests itself in various grades of delirium; in this stage of excitement too, the patient sometimes perishes and dies! — this however is not the usual course of the disease! the Hot stage. like the Cold, though subject to variation in its duration, usually runs a pretty definite course. and then gives way for the third stage, — the Sweating stage or stage of subsidence.

In this last stage all the disagreable symptoms rapidly abate and disappear;

the patient experiences great relief and not unfrequently, his condition soon comes to assume that of perfect health. This appearance however is entirely deceptive, for after the lapse of a certain length of time, days or weeks, according to the variety of the disease, we find the same symptoms recurring, and the same phenomena marking each succeeding paroxysm.

The predisposing causes of Intermittent Fever, are physical debility in whatever way it may be produced. The extremely hot weather of the Summer months is of itself often sufficient to produce such general debility and relaxation of constitution as strongly to predispose to an attack of the Fever, but a more powerful, and perhaps the strongest of all the predisposing causes is a former attack of this disease, or of any form of Malarious Fever. Malaria itself or Miasmatic poison, is the essential cause of Intermittent Fever! Now what this is

as I before said, is not known, and from the fruitless efforts that have from time to time been put forth by scientific investigations for the purpose of ascertaining the nature of this subtle and deleterious agent, it is not probable that the present generation will ever be much wiser upon this subject than they are at present.

It is thought however to be a gas, buoyed up by the atmosphere, and transmitted by the wind to a considerable distance from the source of its generation.

In this form it is supposed to be inhaled, and in some mysterious way to produce the poisonous effects that manifest themselves in the characteristic phenomena above alluded to.

By the periodicity of Intermittent Fever, is meant the regular periodic recurrence of its paroxysms, and this is certainly a very remarkable feature in its natural history, one that has elicited a good deal of interest among scientific

men, and has been accounted for as various as such mysteries generally are. Each successful discoverer willing to find a theory entirely satisfactory to himself, but unfortunately for his reputation such as unsatisfactory to every body else.

The cause has thus far not been satisfactorily ascertained, and from its nature it will very likely elude for all time to come the closest scrutiny of the most searching minds.

Fortunately however for humanity we are not so completely in the dark in respect to habits and some of the properties of malarious poison, and what is more important still, the treatment of malarious fevers has been so modified within the last few years, that the disease is much more manageable now than it formerly was.

It is at night chiefly that this lurking poison seems to manifest itself most plainly, it seems to prefer darkness

to light. The most plausible conjectures of which seem to be, either 1. that the poison is more copiously evolved at night, or 2. is in a more concentrated form, or 3rdly. that the system at night is more susceptible of its pernicious influence. Now whether any or all of these conjectures combined furnish a true explanation of this fact. I shall not undertake to decide; — the fact is established, and it is that which is of practicable importance and value, both to the profession and to the society.

The specific gravity of malaria would seem to be greater than that of atmospheric air, evidence of which is found in the fact. that it is more abundant near the surface of the earth than at more elevated points; thus those who lodge in the basement-rooms of a house are more liable to the attacks of malarious fever, than are those who occupy the attic. — so also the inhabitants of high

localities are comparatively exempt: while those who live in the valleys below, suffer greatly from its ravages. A knowledge of this fact would furnish useful suggestions as to the probable healthfulness of a particular locality in a malarious district.

That malaria may be transferred from one locality to another by currents of air has been ascertained from the known fact that persons comparatively remote from the habitat of malarious poison, are often attacked by the fever, during or soon after a continued breeze setting from the direction of the malarious district in which they reside. The poisonous emanations may thus be transferred to a considerable distance, without becoming sufficiently dilute to lose the power of impressing its poisonous effects upon the system.

Another trait in the character of marsh miasm, is its unwillingness or inability to

cross any considerable expanse of water? Why this is so has been the subject of some investigation, the most probable cause seems to be that the poison in its transit over water is absorbed by it. Whether this be the correct explanation of the fact is not so important as the fact itself. For by taking advantage of a knowledge of the fact, one, even in the vicinity of a malarious country, may place between himself and the malarious district an impassable barrier.

Thus persons may remain on shipboard near a malarious coast with entire immunity from the fever. While if they are so imprudent as to go on shore, they are very liable to be attacked.

A grove or forest of trees, also has the effect of intercepting the poison, and protecting those who are thus separated from the malarious locality; so a high wall affords protection. While a high hill or mountain seems to afford

an efficient barrier to its progress.

The most frequent lesions discovered after death in Intermittent Fever, are enlargement of the Spleen, disorder of the liver, and evidences of inflammation in the Gastro-Intestinal track.

Of these lesions, by far the most usual is enlargement of the Spleen. — this viscus sometimes attains an enormous size. It has been known to weigh as much as Eleven pounds. This enlargement is attributable to congestion and consequent engorgement, and may depend in great measure upon obstruction in the portal circulation.

The diagnosis of Intermittent Fever is generally sufficiently clear and easy; the disease with which it is most likely to be confounded is its kindred malady Remittent Fever; this error however may generally be avoided without difficulty & indeed when it is fallen into, it is not of much practical importance, since

the treatment of the two diseases is nearly identical.

I come now to speak of the treatment of this curious and important disease.

As it depends upon the action of a specific poison, the rational indication would seem to be the removal of that poison as speedily as possible, or to neutralize it, as it were, if innocuous to the system.

Happily this indication is amply fulfilled by Cinchona and its preparations. No known indication is this powerful agent and so universally efficient in the treatment of malarious fevers, that it is properly regarded as a specific for malarious poison, and the practitioner every where relies upon its efficiency with implicit confidence.

This invaluable agent owes its to antiperiodic virtues to the two active principles that it contains, to wit: Quinine & Cinchonine; these two active

principles are found in the crude bark, in the form of Kinate of Quinia & Kinate of Cinchonia. The form however in which it is far most frequently administered is that of Sulphate of Quinia & Sulphate of Cinchonia: the therapeutical value of these two agents is very nearly the same, — the only difference perhaps being that the former is a stronger and more powerful agent than the latter, so that when the latter is used, the quantity must be proportionally increased so as to equalize the effects of the two agents, — in the proportion of 4 to 3.

There has been considerable diversity of opinion among medical men as to the quantity of Quinine that should be administered at a single dose, also as to the best time of its administration; many contending that in ordinary cases of Intermittent fever, the dose should not exceed from 3 to 5 grs. and should be given during the intermission of the paroxysms, sufficiently often to get from 12 to

20 grs. into the system, previous to the time of the anticipated paroxysm; — others holding that it is better practice to administer larger doses, or a larger quantity, at a single dose, as more likely to produce a prompt & permanent abstraction of the fever; some maintaining that it is better practice under all circumstances where practicable, to prepare the system for the full action of the specific, by appropriate medicines, while others seem to attach but little importance to this preliminary treatment; and advise the use of Quinine as a primary and sole agent; some disapproving the administration of Quinine during the paroxysm, while others insist that it may safely and properly be administered in the paroxysm.

The legitimate inference as I think from all these discrepancies of opinion is that under ordinary circumstances, it matters but little which of these theories

we follow, — the circumstances of each particular case generally suggesting to the intelligent and careful practitioner the best course of treatment for that case.

Where the symptoms are not urgent, it seems to me, it would be better to commence with by the use of emetics or cathartics any source of irritation in the stomach & bowels, (being careful always to produce as little irritation by these remedial agents as is practicable) before the substitution of the specific, as the system would thus be brought into a more favorable condition to receive the desired impression of the specific itself; then as to the size and frequency of the doses, I think it would matter but little whether they be larger or smaller, more or less frequent, so that a sufficient quantity, and not too much, were administered long enough before the expected paroxysm, to bring the system completely under the influence of the anti-

periodic agent: while on the other hand where the symptoms are urgent, where the fever presents what is denominated the pernicious or malignant type, where there is great depression of the powers of life, I should not hesitate to administer the Quinine or Cinchonine at once and freely, with the hope of arresting the disease at one or a single blow.

The danger of the poisonous effects of this powerful agent, as manifested in deafness, and more rarely in blindness, should warn the judicious practitioner not to push it too far, and never to resort to this heroic treatment, except when the symptoms of the disease imperatively demand it: while on the other hand, when the malignant character of the disease indicates the danger of temporizing, he should not wield his antidote with a timid hand, but strike promptly & fearlessly, and thus afford to his patient perhaps the

only chance of escape from impending dissolution.

Notwithstanding the unquestioned virtues of the preparations of Cinchonia, quinine, it does sometimes fails in the most skillful hands to produce its desired effects, and in such cases, we have to turn with disappointment and regret, but not without confidence to other agents, which though of secondary value in the treatment of intermittent fevers, yet often succeeds promptly, after the former has been resorted to in vain.

First among these latter, and second in importance only to Cinchonia & Cinchonia themselves, may be mentioned Arsenic. This is a most powerful agent both for good and for evil, and has been ascertained to possess exact great and unquestionable power over the pernicious effects of malaria, and while it is obnoxious to grave objections, from its danger when employed by ignorant or designing

persons. it at the same time possesses these marked advantages, — it is efficacious where properly employed, it is tasteless and cheap; on account of its cheapness it commends itself to that class of persons who are ill able to procure the more expensive antiperiodics, — and being free from any unpleasant taste, it may be administered with far more facility to children, and those whose stomach obstinately and persistently revolt at the taste of Quinine.

The form in which it is usually administered is Arsenite of Potassa in solution, called also Fowlers Solution. Of this Solution 10 minims three times a day would be a full dose for an adult, and indeed it would be better to commence with even a smaller dose than this. it should be administered just after taking a meal, to prevent its irritating effects upon the mucous membranes of the stomach.

There two powerful antiperiodics have

been not inaptly styled the sheet anchor of our hope in the cure of Intermittents.

Many other remedies of minor importance have from time to time been variously estimated: but as these are of far less value as remedial agents in the treatment of Malarious fevers. I shall content myself by merely enumerating the principal of them.

First then in this sub-class, may be be mentioned the Ferrocyannuretti of Iron, which Stokes considered next in efficiency to Quinine & the Arsenical solution; this medicine given in doses of 6 gr. every three hours, it is said, has often succeeded in arresting the fever.

Willow Bark, in substance or in decoction, and Salacine the active principle of that bark, are believed to contain antiperiodic virtues; also the Holly leaves, and their active principle, Ilicine, have been in France, reputed.

Febrifuge. A curious remedy is mentioned by Dr. Craig, as having been resorted to by Dr. Guthrie in the practice of the Lakes of Man, in 1760, where he is said to have succeeded in curing over 60 cases of Intermittent Fever, — to wit, the [illegible] Black Spider, or what is more familiarly known by the name of Cobweb. This singular remedy is administered in form of pills.

Charcoal is also reputed to have been effectual in the cure of Intermittents.

Piperine, the crystaline salt of pepper is another agent of this class, to which several more might be added, but as they are all of them, only secondary in importance, and but rarely resorted to by the profession, I deem it unnecessary to enroll the list any longer.

It will not be amiss here to advert briefly to the peculiar treatment of each of the three stages of a paroxy-

-ysm of Intermittent Fever. And this must depend measurably upon the prominent symptoms which each stage presents; in many cases of the simple type they require but little if any especial treatment; in graver cases however it may become important to watch the symptoms as they arise, and combat them upon general therapeutical principles. In the cold stage it often becomes necessary to apply heat externally, by means of hot bricks, bottles of hot water, or bags of heated sand; sometimes warm baths are resorted to, or the hot air bath may be used with advantage.

Other means, as blood letting and emetics, have been recommended by some, but they seem to be of doubtful propriety. Warm drinks might be of service.

In the Hot Stage, opium has been strongly recommended by Dr. Lind, who has experimented with this agent extensively and found it effectual in relieving

the most urgent symptoms in almost every case. Where there is great vascular excitement, & especially if connected with plethoric habit, venesection may become necessary. — if there be a tendency to delirium, the same means would be indicated; so where symptoms of local inflammation manifest themselves. Bloodletting either general or local may be demanded.

In short, in these cases, as in all others, the symptoms must be carefully noted, and the indications that they present must be promptly responded to.

The sweating stage does not usually require much attention; if the debility should be excessive, it may generally be arrested by gradually reducing the temperature of the surface.

In all cases, intermittent fever, even after the recurrence of the paroxysm has been prevented, and the disease to all appearance has been entirely removed, it is better to continue the antidote

medic treatment, in gradually diminished doses until all traces of the disease are gone, and perfect health is restored.

Unless such precaution be observed, the disease is very apt to return, and, with each recurrence, becomes more obstinate and unmanagable.

I come now, in the last place, to speak of the Prophylactics of this treatment. Under this embraces those agencies that are designed to avert the disease.

As in all other diseases, so in this, the Prophylaxis is of great and paramount importance, for if we can prevent the accession of a disease, we achieve what is in my opinion the greatest triumph of our art. By these means we not only place the patient beyond all danger from the disease, but we spare to him the inconveniences and anxiety and suffering, which necessarily follow in the track of every disease, however favourable its termination may prove. The only

disagreeable feature in connection with it is the branch of our profession which of all others is least profitable in a pecuniary point, to the practitioner.

Of the Prophylactic measures as against Pernicious Intermittent, undoubtedly removal from the malarious district, before the poison has been imbibed, would be most effectual; but in most cases this would be impracticable, and in almost every case disagreeable to absent ourselves from home even for a season, — or that while this is beyond comparison the most efficient preventive measure, it is perhaps of them all, of the least practical value.

Here, as in the treatment of the disease, the most reliable agent, perhaps, is Quinine, for being taken into the system simultaneously with the reception of the poisonous emanation, it seems to seize upon and completely neutralize its noxious qualities. Its ad-

-dition to this, it is important to avoid exposure to night air, and cold and moist weather; also to occupy the upper rather than the lower chambers as sleeping apartments, thus avoiding exposure to the poison at night, when it seems to be more abundant, more concentrated, and therefore more likely to produce its specific effects upon the system. The Orinasal Respirators, invented by Mr. Jeffreys, would seem to afford almost complete protection to those who would submit to the inconvenience of wearing them, but the great inconvenience of such a contrivance, destroys almost entirely its practical value.